OUTLINES
OF
ENERAL PHILOSOPHY

100
CH.A/10

BY

ANIBHUSHAN CHATTERJI, M.A., B.L.,

Professor of Philosophy, (Emeritus), City College, Calcutta;
ometime Professor, Scottish Church College, Calcutta;
Author of 'Principles of Ethics';
Examiner, Calcutta University.

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> "Philosophy, thou director of our lives,
> Thou friend of virtue and enemy to vice,
> What were we, what were the life
> Of man at all, but for thee!"
>
> *Cicero.*

NINTH EDITION

(Revised and improved)

[VOL. I]

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To
The Sacred Memory
of
MY FATHER,
THE LATE BABU NANDALAL CHATTERJI,
whose affectionate care and zeal
guided me safely on my way
to
the temple of learning,
this treatise
is most respectfully dedicated.

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PREFACE TO THE SECOND EDITION.

Lectures delivered to my pupils formed the nucleus of this work. It is adapted to the requirements of students preparing for the B. A. Examination and is suited to their capacity. But though it is mainly intended for college students, its treatment of the entire subject is, I think, sufficiently systematic to interest also the general readers.

The standpoint adopted in this book is idealistic. I have tried to defend herein the doctrine of Objective Idealism, Ideal-Realism or Panentheism which is essentially monistic and theistic in character; but my main object has been to state and explain as clearly as possible all the conflicting theories and thus to supply the readers with materials for independent judgment. I have given the different views on every important topic, with a statement of the reasons which seem to justify one as distinguished from the rest. My obligations to other writers have been generally acknowledged in proper places. I may add here that I have not followed any particular thinker, and my treatment of the entire subject is, in the main, independent.

For the benefit of college students for whom it is mainly intended, University questions of several years have been inserted at the end.

CALCUTTA,
AUGUST, 1918.

P. B. CHATTERJI.

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PREFACE TO THE THIRD EDITION.

The favourable reception of the first and second editions of this book by the teachers and students of Philosophy has encouraged me to issue it again in a revised form. In this edition a few additions and alterations have been made here and there; but the original plan has been strictly adhered to. An attempt has been made in this book to reconcile Empiricism with Rationalism, Realism with Idealism, Pluralism with Monism, Science with Metaphysics. Every important topic has been fully discussed in it, and every care has been taken to make it an easy and interesting study to beginners.

My thanks are due to those professors of Philosophy who have kindly recommended the book to their pupils.

CALCUTTA,
SEPTEMBER, 1919.

P. B. CHATTERJI.

PREFACE TO THE FOURTH EDITION.

In the present edition the book has been subjected to a careful revision, and additions and alterations have been made wherever they have appeared desirable. Appendix A is supplementary to the text; and Appendix B contains University questions of several years. It is hoped that the improvements made in this edition will enhance the usefulness and popularity of the book. I take this opportunity to thank once more those learned professors of Philosophy who have done this treatise the honour of adopting it as a text-book for beginners.

CALCUTTA,
SEPTEMBER, 1922.

P. B. CHATTERJI.

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PREFACE TO THE FIFTH EDITION.

In the present edition the book has again been thoroughly revised, and additions and alterations have been made here and there.

CALCUTTA,
JULY, 1930

P. B. CHATTERJI.

PREFACE TO THE SIXTH EDITION.

In the present edition the book has been slightly enlarged in bulk by the insertion of new matter. Appendix A contains University questions, and Appendix B is supplementary to the text. It is confidently hoped that the improvements effected in this edition will render the treatise more useful to those for whom it is intended.

CALCUTTA,
SEPTEMBER, 1936.

P. B. CHATTERJI.

PREFACE TO THE SEVENTH EDITION.

The present edition appears with various improvements. The entire treatise has been subjected to a thorough and searching revision, and new matter has been inserted; but the original plan has been adhered to as far as possible.

The fact that the work has already passed through several editions proves that its merits have been widely appreciated; and I confidently hope that, in its present revised form, it will be found more useful by University students as well as by general readers interested in the subject of Philosophy.

CALCUTTA,
SEPTEMBER, 1942.

P. B. CHATTERJI.

PREFACE TO THE EIGHTH EDITION.

The issue of a new edition has enabled me to effect further improvements which, I trust, will considerably enhance the value of the book. Appendix A contains University questions, while Appendices B, C, D and E are supplementary to the text and supply much additional matter to the reader.

My thanks are due to those learned professors of different colleges and universities who have honoured this treatise by adopting it as a text-book for their pupils.

CALCUTTA,
FEBRUARY, 1947.

P. B. CHATTERJI.

PREFACE TO THE NINTH EDITION.

The book has passed through several editions, and this fact alone is a sufficient proof of its immense popularity. In the present edition the entire work has again been subjected to a careful revision. The appendices supply the readers with much new matter. The treatise as a whole has been materially improved, and I believe it will now prove more useful and interesting to the students of Philosophy.

Calcutta,
September, 1949.

P. B. CHATTERJI.

SYLLABUS IN
GENERAL PHILOSOPHY

(PASS & HONOURS)

as prescribed by

THE CALCUTTA UNIVERSITY.

(With references to Volumes, Chapters & Sections of this book).

Relation of Philosophy and Science (*Introduction*, § 4). Their difference in method (*Introduction*, § 4, and *Ch.* I, § 1). Relation of Epistemology and Metaphysics (*Introduction*, § 3, also *Vol. II, Appendix B*).

Relation of Epistemology and Logic (*Vol. II, Appendix B*).

General Theory of Judgment (*Vol. II, Appendix D*).

General Nature of Inference (Do. Do.).

Theories of the origin of knowledge—Empiricism (*Ch. III*, § 2). Intuitionism and Apriorism (*Ch. III*, § 2, pp. 46-49).

Space and Time (*Ch. IV*, § 4 & § 5). Concept of substance (*Ch. IV*, § 2). Theory of Causality (*Ch. IV*, § 3).

Types of Realism and Idealism (*Chapter II*).

Theories of Evolution (*Chapters X and XV*). Matter, Life and Mind as stages of Evolution (*Chapters VIII, IX, X and XV*).

Value and Reality (*Appendix E*). God and the World (*Chaps. XX and XXI*). The Absolute (*Chapter V*, § 2, 4 & 5; *Ch. XIX*, § 2 & 3, also *Ch. XXII*).

N. B. Every student of Philosophy (whether he has taken up the Pass Course or Honours Course in the subject) should read the ninth edition of this treatise thoroughly without omitting a single topic.

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OUTLINES OF GENERAL PHILOSOPHY

INTRODUCTION.

DEFINITION AND PROVINCE OF PHILOSOPHY AND ITS RELATION TO OTHER BRANCHES OF STUDY.

§ 1. **Philosophy and philosopher.** The words 'Philosophy'* and 'philosopher' are of Greek origin. The former originally stood for 'love of wisdom', 'pursuit of knowledge for its own sake', 'search for truth'; and the latter signified a 'lover of wisdom' or a 'truth-seeker'—'one striving to attain knowledge'.

It is easy to see that if the words are taken in their original senses, any pursuit of knowledge—any scientific study aiming at the attainment of truth—may be termed 'philosophy'; and whoever is engaged in the task of discovering truth—be he a physicist, a biologist or a psychologist, be he a politician, a mathematician or a metaphysician—may be called a philosopher. (As commonly used, however, philosophy means the attempt at a rational unification of knowledge—the endeavour to organise the truths furnished by the different branches of study, and thereby to arrive at a rational explanation of the universe as a whole.

---

* Derived from Greek *p*[illegible], loving, and *sophia*, wisdom or knowledge.

Hence we may briefly define philosophy in the following words of Professor Weber—"It is the search for a comprehensive view of nature, an attempt at a universal explanation of things." (*History of Philosophy*, page 1). It is, in fact, the sustained effort of man as a rational being to attain a clear and consistent conception of the world-system and his own relation to it—his origin, function and destiny as a factor of it.

The foregoing remarks make it clear that philosophy is not a study of any particular department of the universe. It is a comprehensive study of the world of mind and matter viewed as one whole. A philosopher, therefore, is one whose life is devoted to such study—one who seeks to explain the world-system and man's place and function therein.

§ 2. Scope of Philosophy. From what has been said above it will be easy to understand the precise scope or province of Philosophy. Philosophy takes a comprehensive view of the entire system of things, interpreting the phenomenal aspect by reference to the real. As Dr. Caird very aptly observes, "There is no province of human experience, there is nothing in the whole realm of reality, which lies beyond the domain of philosophy, or to which philosophical investigation does not extend." (*Philosophy of Religion*, p. 3). The province of Philosophy thus embraces the whole sphere of being—man, Nature and the Absolute Reality or God Himself. Philosophy, therefore, has three principal branches:—(1) Philosophy of Mind, (2) Philosophy of Nature, and (3) Philosophy of the Absolute or God. The first avails itself of the results of Empirical Psychology, and, with the help of metaph[illegible]ical speculation, seeks to explain the real nature of [illegible], soul or spirit. The second employs the results of the physical sciences,

Philosophy

and, with the help of metaphysical speculation, tries to explain the real character of the external world of matter. The third uses the results of the Philosophy of Mind and Philosophy of Nature to discover the nature of the Supreme Cause of the entire universe of mind and matter. It seeks to trace back the worlds of mind and nature to a single ultimate reality. It aims at showing that finite minds and things can be accounted for only as products of the operation of one Infinite and Absolute Mental Power.

Thus unification of knowledge is effected and the world is understood as a whole; and this is the goal of true philosophy.

It is clear from the above that philosophy has to answer certain broad questions regarding the universe. It is mainly concerned with the questions about the "whence" and the "whither" of things. How have mind and matter come into existence? What are they in their essential nature? How have they come to be connected with each other? What is the destiny of man? What is the nature of the First Cause of the universe? Such are the questions which philosophy seeks to answer.

It should be borne in mind that modern philosophy claims to be based on Epistemology which is an enquiry into the nature, origin, conditions and limits of knowledge. Hence Epistemology may be said to be the preliminary phase of Philosophy. Indeed, it may be said that Philosophy begins with Epistemology, derives its materials from the sciences and rises through these into Ontology or Metaphysics.

Hence the meaning and province of Philosophy will be clearer if we consider the relation of Philosophy to Epistemology, Science and Ontology.

§ 3. Philosophy and Epistemology. Epistemology* means literally the 'science of knowledge'. It is an enquiry into the nature, origin and limits of knowledge. It raises and discusses the questions: "What is knowledge? Is knowledge attainable at all? If so, how far, in what sense, and by what means?"

---

* Derived from Greek *ep[illegible]me*, knowledge, and *logos*, discourse, science.

What, then, is the relation of Philosophy to Epistemology? A little reflection shows that Epistemology is the basis or rather the preliminary phase of true philosophy. Philosophy must justify itself at the outset by showing that it does not pretend to know more than what it has the means of knowing. It must begin by answering such questions as the following:—"What are the means and conditions of knowledge? How far does our knowledge extend?" Before we proceed to construct a philosophy of mind, nature and God, it is necessary for us to show that we have the *capacity* for it—that our mental faculties enable us to carry on such an investigation. As Dr. Caird says, "Before we yield ourselves up to the guidance of philosophy, must not philosophy be asked to prove that there is nothing presumptuous in this assertion of its universal authority? Before we admit the pretensions of reason to treat thus of all things in heaven and earth, to regard nothing as too high or sacred to be subjected to its enquiries, must we not, as a preliminary condition, ask it to give us a satisfactory proof of its capacity to deal with them? Without a prior cricitism of the organ of knowledge, can we tell whether in any given case it may not be entering on forbidden ground?" (*Philosophy of Religion*, pp. 3, 4).

We conclude, therefore, that an epistemological enquiry is necessary at the beginning of our philosophical investigation. Indeed, since Epistemology deals with the conditions, range and limits of genuine knowledge, it may be looked upon as "the foundation on which the superstructure of philosophy has to be raised."

* Epistemology is a critical reflection on Metaphysics. *

§ 4. Philosophy and Science.* Before we proceed to discuss the relation of philosophy to the sciences, we should try to understand their characteristics. A science is a systematic enquiry into some particular department of the world—an attempt to understand the nature and operation of the phenomena of some special class. It is thus a study of a definite section or portion of the universe. There are as many sciences as there are departments of the universe or classes of phenomena. Thus,

(*a*) Some sciences deal with the phenomena of *matter* and may be called *material* sciences—*e.g.*, Astronomy, Physics, Chemistry;

(*b*) Others deal with the phenomena of *life* and may be called *biological* sciences, *e.g.*, Botany (or the study of plant-life) and Zoology (or the study of animal life);

(*c*) Others deal with *mental* phenomena and may be called *mental* sciences—*e.g.*, Psychology, Sociology.

Now, the sciences have the following characteristics:—

(*i*) They deal severally with the different departments of the universe considered apart from one another.

(*ii*) They deal with the *phenomenal* aspect of things. In other words, they deal with things as they appear to human experience, and not with things as they may be in themselves apart from experience.

---

* The word 'science' has been used here in a restricted sense, and this is the sense in which it is generally used now-a-days in English literature. It is sometimes used in a wide sense to denote any strenuously and methodically conducted pursuit of truth. If the word is taken in this sense, even Philosophy may be called a science. It may be called the highest or the most general science—'the science of all sciences'.

(*iii*) They are based on observation (and, if possible, experiment) and inductive reasoning.

(*iv*) They aim at discovering general truths regarding phenomena coming within their scope. In other words, every science seeks to discover the laws governing the phenomena which constitute its province.

Thus they are all *empirical* in the sense that they give us only experiential knowledge.

How, then, is philosophy related to the sciences? We have seen before that Philosophy is a comprehensive study of the entire universe. We have also seen that different sciences study different sections of it. Hence philosophy is partly dependent on the sciences. These supply philosophy with materials. Philosophy combines or unifies the results of all the sciences, mental, biological and material, and thus explains the connection of the different departments of Nature and the plan of the whole. By using the results yielded by the sciences, it rises to a conception of the nature of the power that evolves and sustains the world of things and minds. As Dr. Paulsen remarks, "Each particular science investigates a definite portion or cross-section of reality. Physics considers reality in so far as it is corporeal and manifests certain general modes of action; biology considers the processes of life which take place in this matter; psychology considers the real from another side, in so far as it is consciousness. We get philosophy by combining all the results of these sciences for the purpose of answering the question as to the nature of reality." (*Introduction to Philosophy*, p. 19).

But if it be true that philosophy is thus far dependent on the s[illegible]t is equally true that the sciences are in a sense dependent on philosophy. It is philosophy w[illegible]ystem[illegible]ses, co-ordinates and completes them; [illegible] is philosophy which deals with

their presuppositions. We know that the sciences assume such ideas as substantiality, causality, space, time and the like without explanation, and these are explained by Philosophy aided by Metaphysics. The sciences aim at explaining to us the nature and operation of the different classes of things constituting the world of our experience. But we cannot understand precisely the constituent things of the world without understanding how they are related to one another as factors of one organic whole and products of one central power. In other words, we cannot fully understand the subject-matter of any science without *philosophising*.

From the foregoing remarks it is apparent that philosophy and science are closely related. In fact, the relation between the two is one of interdependence. As Prof. Weber says: "The sciences, without philosophy, are an aggregate without unity, a body without a soul; philosophy, without the sciences, is a soul without a body, differing in nothing from poetry and its dreams. Science is the indispensable foundation and the matter, as it were, of philosophy; it is, to use an Aristotelian phrase, potential philosophy. Philosophy, in turn, is science *in actu*, the most exalted function of the scholar, the supreme satisfaction of the scientific spirit and its natural tendency to comprehend everything into a unity" (*History of Philosophy*, pp. 2, 3).

Thus philosophy and science are really correlative to each other; each supplies something that the other wants, *in order to be complete and satisfying as knowledge*. Philosophy depends on the sciences for its materials—it deals with the ultimate principles presupposed in, and the general results yielded by, the sciences. Sciences, again, are incomplete unless interpreted and supplemented by philosophy. Indeed, philosophy is at once the summary of the sciences and their completion.

5. Philosophy and Ontology. By Ontology is meant the 'Theory of being' or the study of the realities underlying phenomena. It is the attempt to go beyond phenomena or manifestations and to understand the realities which manifest themselves in and through them. It seeks to answer the questions :—What is the nature of soul? What is the nature of matter as it is in itself? What is the nature of the Absolute Reality or God? How are they related to one another? It is thus identical with what is generally called Metaphysics.*

---

* Metaphysics, as commonly understood, means the study which aims at an understanding of the nature and relation of the realities underlying phenomena, *viz.*, soul, matter and the Absolute Reality which is the common ground of both. It is thus identified with Ontology, but is sometimes used in a wider sense so as to include both Epistemology and Ontology. The term "metaphysics" literally means "what comes *after* Physics" (Gr. *meta*, after, and *physika*, physics, from *physis*, nature). Metaphysics owes its name to the editorial arrangement of Aristotle's treatise on it by Andronicus of Rhodes (63 B.C.) who placed it *after* the treatise on physics in the body of Aristotle's collected works. The phrase thus casually applied to Aristotle's treatise became ultimately a name for the subject treated of therein. The name given by Aristotle himself to the subject was "First or Primary Philosophy", and from his own description of it as concerned with the nature of being as being, the latter term *ontology* was coined. It should be borne in mind that the term 'metaphysics' is not inappropriate; for it may also be used to mean "what lies *beyond* the natural or physical phenomena" (*meta*=beyond). It may be added in this connection that the singular form 'metaphysic' is also sometimes used.

The term 'ontology' means literally "the science or doctrine of being" (Gr. *ontos*—being, and *logos*—discourse, science). It was Wolff who made the term current. Philosophy was divided by him into two parts—theoretical and practical. The former, called Metaphysics, was again divided into (1) a general part (Ontology) dealing with being in general, and (2) a special part dealing with the chief forms of being, namely, God, matter and soul. Thus the original significance of Ontology is "the general theory of being as being, reality in its ultimate nature." In modern times it is usually regarded as a theory of the realities (soul, matter and God) as distinguished from the theory of knowing or Epistemology.

We are now in a position to understand the relation of Philosophy to Ontology.

The sciences constitute Phenomenology—they are empirical investigations into the phenomena or manifestations of realities; Ontology is limited to the realities or essences underlying phenomena. Both are one-sided. Philosophy combines empirical enquiry with metaphysical—phenomenology with ontology, and thus arrives at a rational explanation of the world of substance and phenomena as a whole. It supplements empirical investigation by metaphysical and combines the results of the two into a connected system. In fact, ontology is the most vital part of philosophy. For phenomena, viewed merely as phenomena, are meaningless abstractions. We cannot think of mental phenomena—of thinking, feeling and willing—without thinking of some reality (called soul or spirit) that underlies them and gives them their unity and connection; nor can we think of material phenomena without thinking of them as modes or manifestations of something that we call *material* substance. And we cannot understand the world of mind and matter as one connected whole without forming some idea of the highest or the ultimate reality (called the Absolute) which gives them their existence and connection.

To sum up: Ontology or metaphysics, which means the study of the realities lying beyond phenomena, is the most important part of philosophy; for "phenomena by themselves leave our conception of the world incomplete, like the arc of a circle."

NOTE I.

PHILOSOPHY, RATIONAL AND EMPIRICAL.

We have assumed above the possibility of *metaphysics* or *ontology*. We have asserted that philosophy reconciles and combines the results of science and metaphysics—phenomenology and ontology and thus arrives at a rational explanation of the world of realities and phenomena as a whole. This kind of philosophy is called *Rational*. There are thinkers known as sceptics, positivists and agnostics who maintain that positive knowledge is possible only within the sphere of phenomena or experience to which accordingly all thought should be restricted, and all attempts to understand soul, matter and God should be abandoned. Thus their philosophy is *empirical*—it stops short of metaphysics and limits itself to drawing out and unifying, as far as possible, the highest results of the sciences, and strives to explain the world in so far as it may be explained in terms of experience merely—regarding what lies beyond experience as *unknown and unknowable*. Indeed, an elaborate attempt has been made by Spencer and his followers to construct a system of *empirical philosophy*—*i.e.*, a conception of the world wholly in terms of phenomena or of experience alone, without any attempt to understand the ultimate ground of it. (*Vide* the theory of Mechanical Evolution, Ch. X.)

A full criticism of Agnosticism will be given in the sequel. In the mean time it may be simply remarked that Empirical Philosophy "leaves knowledge in the condition of a truncated pyramid, so to speak, the lines of which converge so far and then lose themselves in blank space—the unknowable. Rational philosophy, on the contrary, attempts to fill in what is wanting, and complete the pyramid by means of metaphysical thought." In other words, Empirical philosophy leaves certain gaps which are filled up by Rational philosophy with metaphysical ideas.

NOTE II.

Definitions of Philosophy.

We proceed to consider here some of the definitions of Philosophy given by distinguished writers in order that the meaning and scope of the study may be clear.

1. "Philosophy aims at a knowledge of the eternal, of the essential nature of things."—*Plato*.

2. Philosophy is the science which investigates the nature of being as it is in itself, and the attributes which belong to it in virtue of its own nature." "Philosophy is the science of First Principles."—*Aristotle*.

Remark. The definition given by Plato and the first of the two definitions given by Aristotle identify philosophy with ontology or metaphysics. As we have seen before, this is the most important part or essence of philosophy, inasmuch as the world as a whole cannot be explained without it. Hence these great thinkers have identified philosophy with ontology.

The second definition, as given by Aristotle, is somewhat ambiguous. What is meant by the expression "First Principles"? If by this expression we understand the fundamental principles of knowledge, philosophy becomes identical with epistemology or theory of knowledge. If, again, by it we understand the laws, forces or substances underlying the world-system, philosophy becomes identical with ontology.

3. "Philosophy is the science and criticism of cognition." —*Kant*.

4. "Philosophy is the doctrine or science of knowledge." —*Fichte*.

Remark. These two definitions seem to identify philosophy with epistemology, which, as we have seen before, is only the basis of philosophy. Thus they are too narrow.

✓5. "Philosophy is the attempt to determine what the world must be in order that it may be understood by mind, and what the mind must be in order that it may understand the world." —*Schelling*.

Remark. This definition well expresses the meaning of philosophy. It means that philosophy is the attempt to understand the essence and mutual relation of mind and nature.

✓6. Philosophy is the science of the absolute idea."—*Hegel*.

Remark. This, too, well expresses the meaning of philosophy. It means that philosophy is the attempt to understand the absolute thought or idea which evolves and sustains the world-system.

7. "Philosophy is the elaboration of concepts."—*Herbart.*

Remark. This is rather vague. Herbart means to say that philosophy is the study which examines the ideas derived from common experience, clears away the contradictions involved in them, elaborates them and thus arrives at a system of concepts regarding the world at large. Now, this is undoubtedly the function of philosophy.

8. "Philosophy is the universal science which has to unite the cognitions attained by the particular sciences into a consistent system."—*Wundt.*

9. Knowledge of the lowest kind is ununified knowledge, science is partially unified knowledge, and philosophy is completely unified knowledge—the generalisations of philosophy comprehending and consolidating the widest generalisations of science." "Philosophy is the knowledge of the highest degree of generality."—*Herbert Spencer.*

10. "Philosophy is the sum total of all scientific knowledge."—*Paulsen.**

11. "Philosophy is the science of sciences—*i.e.*—it is the attempt to co-ordinate the results of the sciences."—*Comte.*

Remark. These four definitions, which have been given by philosophers of different schools, imply that philosophy unifies the results of the special sciences in order to arrive at a consistent conception of the world-system. They are thus far all right. But they are obviously open to the objection that they seem to make philosophy wholly empirical—they make it appear that it is nothing more than the summation of the results of the particular sciences. But, as we have seen before, a complete system of philosophy goes beyond the sciences and rises into the sphere of ontology or metaphysics. Indeed, without ontology, a complete unification of knowledge and a consequent explanation of the world-system would be impossible.

12. "Philosophy is reflection, the thinking consideration of things."—*Schwegler.*

Remark. This is rather vague, though it is correct so far as it goes. It implies that philosophy is a careful study of the whole system of things.

✓13. "Philosophy aims at a rational unification of knowledge and belief by means of Metaphysics."—*Kulpe.*

✓14. "Philosophy is love for 'the truth'—the complete body of knowledge that includes in it all truths—all truths organised into one great system."—*Marvin.*

Remark. These two definitions clearly bring out the meaning of philosophy. It is through unification of knowledge or the organisation of truths that an ultimate explanation of the world at large is possible.

15. "Philosophy is the science of the universe, not in its particular details, but in respect of the principles which condition all its particulars."—*Ueberweg.*

16. "Philosophy is the search for a comprehensive view of nature, an attempt at a universal explanation of things."—*Weber.*

17. "Philosophy implies a conscious and disinterested search for an explanation of the *All.*"—*Robertson.*

18. "Philosophy is such knowledge of those things which are or happen, as will enable us to understand why they are or happen."—*Wolff.*

Remark. These four definitions agree in making philosophy an attempt to understand the world as a whole. They are thus valid.

Conclusion. A careful perusal of the above definitions makes it clear that almost all of them are identical in substance with the definition given in pp. 1 & 2, *viz.*, (philosophy is the comprehensive study of the universe—the search for an explanation of the entire world of finite beings.) Indeed, philosophy has generally been understood in this sense, in the East as well as in the West, in ancient as well as in modern times.

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* Dr. Paulsen gives another definition of Philosophy which is more satisfactory. He says: "Philosophy is simply the continually repeated attempt to arrive at a comprehensive and systematic knowledge of the form and connection, the meaning and import of all things" (*Introduction to Philosophy*, pp. 2 and 3)

NOTE III.

ORIGIN AND NECESSITY OF PHILOSOPHY.

The question is sometimes asked: What is the origin of philosophy? Now, to this it may be replied that philosophy is the necessary expression of a thinking mind. In other words, it rises out of the very nature of man as a rational being. Man's mental constitution is such that, in the presence of the facts of life and Nature, philosophy necessarily appears.

Thus philosophy is due to the natural craving of the human mind which seeks to solve the mysteries of this vast and manifold universe. It is not anything which may be dispensed with at our sweet will. It deals with problems which force themselves upon the human mind and demand solution. Constituted as it is, human mind must philosophise. As Dr. H. Stephen remarks, "The question is not one of philosophy or no philosophy, but one of good philosophy or bad—every rational being has a philosophy of some kind." (*Problems of Metaphysic*, p. 2). Similarly, Dr. Paulsen observes, "Every nation and every man, at least every normally developed man, has a philosophy. The plain man of the people, too, has a philosophy. He gives an answer to the question regarding the origin and destiny of the world and man. In this sense peoples living in a state of nature have their philosophy also." (*Introduction to Philosophy*, p. 3).

And it may be safely asserted that philosophy is not an idle pursuit. As it explains the real constitution of the universe and man's place therein, it indicates the true end of life and the ideal of human conduct. It is thus necessary for the guidance of life.*

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* It is for this reason that Cicero exclaims—

Philosophy, thou director of our lives,
Thou friend of virtue and enemy to vice,
What were we, what were the life
Of man at all, but for thee!

PART I.

EPISTEMOLOGY OR THEORY OF KNOWLEDGE.

CHAPTER I.

METHODS OF PHILOSOPHICAL ENQUIRY AND LIMITS OF KNOWLEDGE.

§ 1. True philosophical method. In the introductory chapter something has been said about the meaning and subject-matter of philosophy and its relation to other branches of study—epistemology, science and ontology. It has been remarked there that a true system of philosophy must begin with epistemology or theory of knowledge. Hence the first part of this book deals with epistemological problems. In the present chapter we have to discuss the methods of enquiry and limits of knowledge.

We may begin by indicating the method that is adopted by modern philosophy in handling its subject-matter. The method may be described as *empirico-rational*. As has been said before, philosophy combines phenomenology with ontology—it supplements empirical by metaphysical investigation. In other words, it accepts and unifies the results established by the special sciences (which are based on observation, experiment and inductive reasoning) and thus arrives at a general conception of the world of phenomena as a whole. Thus far it is essentially *empirical*. But it cannot stop here. It has to *transcend* or go beyond experience—it has to enquire what the phenomena imply or reveal as to the realities that underlie and give rise to them. Now, in attempting to penetrate into the realities underlying the phenomena, it has to depend on pure reason alone. At this stage, therefore, it is purely reflective or speculative and its method may be called *rational*. It should be borne in mind that modern philosophy employs the *critical method, i.e.*, it is based on epistemological reflections. It is generally admitted now-a-days that we must hold at the outset a thorough enquiry into the conditions and factors of knowledge; and we must seek to determine what is implied in knowledge as to the realities known—thus trying to rise from epistemology to ontology. In other words, we must "analyse and criticise the fundamental ideas and principles involved in all knowledge, with a view to clear away whatever contradictions may be involved in them as commonly understood, and determine what is necessarily implied in them as to realities beyond."

The foregoing remarks make it clear that philosophy cannot proceed without speculation and hypothesis. In its attempt to solve the problems presented by experience, philosophy must frame hypotheses and try to verify them by an appeal to facts.* It must consider the various conflicting hypotheses and select that one which appears to be the most satisfactory or adequate. It must raise and answer the questions: On what hypothesis or supposition can the world of phenomena be best explained? What must Nature be in order that it may be known by mind, and what must mind be in order that it may know Nature? Thus hypothesis plays an important part in philosophy. If a hypothesis or theory be self-consistent and consistent with facts—if it is free from

self-contradiction and explains more reasonably than any other theory the facts of experience, then and then only it can be accepted by philosophy.

It is clear from the above that the work of philosophy is mainly reflective and speculative. But it does not defy or ignore experience. It reflects, not on airy nothing, but on facts of experience and the results established by the sciences. It accepts no theory that contradicts experience or scientific truths. It tries, indeed, to transcend experience in so far as it is speculative and ontological, but, as pointed out before, the ultimate test of such speculation is found in the facts of experience only.

We conclude, then, that the method of philosophy is empirical as well as rational, inductive as well as deductive. Philosophy begins with the facts of experience, and rises from these to all the possible philosophical hypotheses, and then proceeds to determine which of them can deductively explain the world of experience. The hypothesis which seems to be the most adequate one for the interpretation of experience and the regulation of life is retained to the exclusion of others.

Philosophy has sometimes been disparaged in modern times by 'scientific' men as 'speculative', as 'a dream', as 'a leap in the dark'. But it must be borne in mind that, without such a speculation or leap, there could be no room even for science. Science and philosophy would be equally swept away from the field of human enquiry, if there were no room for hypothesis and speculation. The so-called 'scientist' who rejects philosophy on the ground that it involves speculation and hypothesis plays the part of the Indian rustic who (as the story says) lopped off the very branch on which he was sitting.

§ 2. Different theories of the methods and limits of knowledge. We have indicated above the best method of conducting philosophical investigation. But

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*Dr. Calderwood indicates very clearly the way of testing a metaphysical hypothesis. He observes, "The ultimate test of all metaphysical speculation must be found in the facts from which the inquiry takes its rise. Merely to *start* from facts is not a sufficient security for the accuracy of subsequent speculation. This security is found only by careful *return* upon the facts out of which the metaphysical problems arise. These, then, are the two fundamental canons of metaphysical speculation: (1) To start from facts in search of the solution of the problems to which they give rise, and (2) to return to the facts for test of every solution proposed." (*Handbook of Moral Philosophy*, p. 222).

in History of Philosophy we find considerable divergence of opinion as to the best philosophical method and the range of knowledge attainable—as to the logic and limits of philosophical thought. A brief account of these theories of method and limit is given below.

(a) *Dogmatism.*

It is the method of philosophical enquiry without a prior criticism of knowledge. Philosophy is said to proceed dogmatically when it carries on its investigation without a prior criticism of the knowing faculty and the efficiency of the methods and principles it employs. In the dogmatic method, therefore, what we call epistemology is altogether wanting. A dogmatic philosophy assumes without hesitation the capacity of mind to know the realities. It assumes, without justification, *i.e.*, without explanation or proof, certain fundamental principles as self-evident or axiomatic and then deduces conclusions from them. In other words, it does not question the truth of the premises with which it starts. It does not raise the question: Is the human mind capable of attaining certitude? Dogmatism generally characterises ancient philosophy, for the first inclination of the human mind is to act without questioning itself. "Dogmatism is the positive procedure of reason without previous criticism of its own faculty. . . . It is the direct effort to understand and interpret the world—the effort of a mind which is as yet troubled by no scruples as to its own competence, or as to the efficiency of the methods and principles it uses. The mind is too busy with its object to attend to itself." (Caird's *Critical Philosophy of Kant*, p. 2).

(b) *Scepticism* (with *Empiricism*).*

But Dogmatism cannot last for ever. It gradually gives rise to Scepticism by which is meant doubting

or denying the possibility of attaining true knowledge. The fundamental principle of Scepticism is doubt or denial of certainty. Different dogmatic systems arrive at different conclusions which contradict each other. Hence a doubt arises in human mind, and it begins to ask the question: "Is knowledge attainable at all ?" "The first effect of the failure of Dogmatism is naturally the rise of Scepticism. The conflict of opposite dogmas produces a sense of hopelessness, and even, it may be, a conviction that 'whatever can be asserted may with equal reason be denied.' Such scepticism may be of a deeper or of a shallower nature." (*Ibid.*, p. 4).

It was in this way that the Scepticism of ancient Greece arose. The clashing of contradictory ideas and arguments gave birth to Sophistry which was a form of Scepticism. It was an amusement with the sophists to set the hypotheses of different dogmatic philosophers against one another. The Sophists ultimately came to the conclusion that "the (individual) man is the measure of all things", so that there can be no common standard of what is good, beautiful or true. "So many men, so many minds." Thus, according to them, there can be no uniformity in our judgments, and therefore knowledge is impossible. (Extreme Scepticism).

Modern Scepticism which is of a deeper nature is the outcome of a critical reflection on the possibility, limits and conditions of knowledge and is associated with the names of Hume, Mill, Bain and others. It is a reaction against dogmatic metaphysics and is the logical consequence of a thorough-going Empiricism.

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* The present section aims at showing that in the development of philosophical thought there is a natural transition from Dogmatism to Scepticism, and from Scepticism to Criticism. A complete and critical account of Scepticism, Positivism and Agnosticism will be given in the sequel. Sceptics and Agnostics generally employ the principle of Relativity of Knowledge to prove that there can be no valid knowledge. It will be shown afterwards that the relativity of knowledge does not affect its validity.

Empiricism is the view that all our knowledge is based on experience alone, and that, therefore, the true philosophical method is experiential or empirical. According to this way of thinking, the mind of every individual, at the time of his birth, is "like a sheet of white paper—a *tabula rasa* or clean slate without anything upon it as yet, but ready to be written on, and all knowledge is impressed on the mind from without, in the form of experience." "There is nothing in intellect which was not previously in sensation." (Locke). Locke and other older empiricists, while maintaining that all knowledge is derived from experience, do not deny the possibility of metaphysical knowledge. But Hume and his followers try to show that, if experience means what is impressed from without in the form of sensations, as Locke himself maintains, then no metaphysical knowledge is possible—nothing can be known about what lies beyond experience. Our knowledge is entirely made up of sense-elements and contains nothing that may be called *a priori*. The external material world is to us only an aggregate of actual and possible sensations.* Mind as known to us is only an aggregate or series of conscious states. Nothing can be known or even imagined about the substances—soul, matter and God—that are supposed to lie beyond experience; for we can think only in terms of experience. We can form no conception of anything outside the sphere of, or apart from experience (sensations and ideas), so that, strictly speaking, we do not know whether any such reality exists or not. We can reason from sensations to sensations, but never to anything beyond sensations. The words substance, energy and the like are meaningless words—they are metaphysical figments which should be banished from philosophy.

Thus, according to Hume and his followers, nothing is really knowable or thinkable beyond the range of experience. We can never go beyond experience any more than we can go beyond our own shadow. We have, therefore, no certainty or knowledge about the realities. By the very nature of the case they are unknown and unknowable.

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* J. S. Mill calls the world 'a permanent possibility of sensations.'

(c) *Criticism.*

Scepticism means, as we have seen before, doubting or denying the possibility of true knowledge. This is a purely negative way of thinking, and men cannot long adhere to this. Scepticism accordingly leads to full criticism of knowledge. (Human mind is gradually led to enquire more precisely into the limits and conditions of knowledge.) But an enquiry into the limits and conditions of knowledge is the business of epistemology. Hence (criticism of knowledge means the same thing as epistemology; and any system of philosophy based on epistemological reflections may be called *critical*.) The critical method was fully used by Kant in modern times. Hence the expressions 'critical method' and 'critical philosophy' are generally used now-a-days to signify the method and thought of Kant. He was roused from his dogmatic slumber by the writings of Hume, and he enquired more precisely into the conditions of knowledge. The conclusion arrived at by him is considerably different from that arrived at by Hume. Kant points out that knowledge is not wholly built of sensations as Hume supposes; it involves *a priori* as well as *a posteriori* elements—reason as well as sensations. Sensations by themselves are only the raw materials which are to be transformed by reason according to its own inherent laws before there can be knowledge. ("The *matter* of our ideas is furnished by the senses; their *form* is the work of reason." "The senses furnish the materials; reason, the cement needed to unite them.") Human mind, which is essentially an active, constructive principle, builds up its conception of the world by applying to sensations certain fundamental notions, such as the notions of space, time, substance, causality and the like; and these are supplied by the mind from within itself. But the mental conception of the world thus formed by the rational mind can have no community of nature with the extra-mental world of 'things-in-themselves' or realities which must remain unknown and unknowable. We see, then, that Kant's criticism of knowledge leads him to what may be called Semi-Scepticism or Semi-Agnosticism. We also find that his philosophy involves both Empiricism and Rationalism.

The Critical philosophy of Kant is undoubtedly an improvement upon the purely empirical system of Hume, but it has its own defects. As pointed out before, Kant leaves a gap between thought and reality; according to him, the world as thought or conceived by us has no resemblance of kind to the world of realities. He admits that there *is* a world of reality which is the ground of our sensations, but asserts that the correspondence between our conception or thought of the world and the real world is only symbolical, somewhat as the words uttered by us have only symbolical correspondence, but no resemblance of kind, to the ideas present in our minds.

A deeper reflection leads the Post-Kantians (Fichte, Schelling, Hegel) to abolish the opposition between thought and reality and to establish their identity. It is especially Hegel and his followers ~~who~~ maintain that thought and reality are at bottom identical—that the ultimate reality is thought or idea realising itself in and through the world, and human thought is a finite reproduction of it. They point out that there cannot be an opposition or chasm between human thought and reality. The agreement of the two is the tacit presupposition on which all science and philosophy proceed. To interpose a barrier between human thought and reality is to make all knowledge impossible, even the knowledge

that there *is* a reality. The very problem as to the relation between thought and reality can only arise if the opposition between them has somehow been overcome. We believe instinctively that there is a real correspondence between our thought and things—between the world of our ideas and the world of reality. We build up our conception of the world out of the impressions imposed on us from without, according to laws of thought, and we *understand* that this conception really represents or reproduces the world of reality. How, then, can this correspondence between the world of ideas and the world of reality and this understanding or conviction that the one is a true representation of the other be adequately accounted for? On what supposition can the world of our experience or thought be a real world? It can be only on the supposition that the world of reality itself is of mental origin and that our thought of the world is a reproduction, in terms of finite mind, of what is already mental. It is only on this supposition that our ideas of things can have some resemblance to, or community of nature with, the things themselves, and true knowledge becomes possible. We must suppose that there is but one Absolute mental being which has evolved the great world of nature according to laws of reason or thought; that we are its finite reproductions; and that, in thinking the world, we reproduce or reconstruct, in terms of our finite minds, what has been already produced or constructed by the Absolute Mind. Thus our thought or knowledge of the world is a finite reproduction—a thinking over again—of the Divine thought which constitutes the world. The essential laws and forms according to which we build up our conception of the world are the same in kind as the essential laws and forms which govern the evolution of the world. Our finite reason can comprehend Nature, because Nature is essentially rational,

Summary.

Philosophy at first proceeds dogmatically, *i.e.*, without criticism of knowledge. The conflict of opposite dogmas gives rise to doubt as to the possibility of knowledge. In other words, dogmatism gives rise to scepticism. But this state of things cannot last long. Doubt leads to reflection, scepticism to criticism. The result of criticism of knowledge may be either a confirmation of scepticism or agnosticism, or the establishment of ideal-realism which makes the correspondence between thought and the world of reality real and essential, thereby making knowledge possible. This will be easily understood if we carefully consider the systems of Hume, Kant and Hegel. Hume's critical reflection leads him to extreme scepticism. According to him, we can never pass beyond the range of actual and possible sensations, and knowledge is wholly built up out of the elements of sensations. A deeper criticism led Kant to the conclusion that knowledge involves not merely sensations, but also certain '*a priori*' notions (forms and categories) supplied by the thinking principle from within itself. But, according to Kant, our knowledge of the world has no resemblance of kind to the 'real world,' so that there are two worlds, so to speak—a world of human thought and a real world of things-in-themselves. The Post-Kantians assert that there is a real correspondence or community of nature between the two, as both are mental products evolved and maintained by mental power. This is the final result of the critical reflection on the possibility, limits, and conditions of knowledge.

(d) *Dialectic.*

The word 'dialectic' literally means the "art of discussing by questioning." It is now used to mean two different forms of reasoning by finding out

contradictions or oppositions. One may be called negative, destructive or analytic dialectic; the other may be called positive, constructive or synthetic dialectic.

(*i*) Negative Dialectic—The negative dialectic is essentially a method of refutation. It consists in exposing the inconsistencies or self-contradictions involved in opinions and thereby destroying them. Hence directly it is a method of refutation, but still it can be used as a means of indirect proof. When a certain proposition is shown to involve an element of contradiction or to lead to some absurd consequence and therefore to be untenable, its contradictory proposition is really established as true; for two contradictory propositions cannot both be false. This method of indirect proof or proof by *reductio ad absurdum* is frequently used in Geometry.

The negative dialectic is often called the Socratic method, because it was used by Socrates in his contests with the sophists. The method followed by him was this:—he always asked or induced his opponents to state their own opinions clearly, and by putting questions to them again and again, he entangled them in contradictions and thus showed them the absurdity of their views. The opinions of the adversaries being thus refuted, his own opinion became indirectly established. The method followed by Socrates resembles the method followed by lawyers at the time of cross-examining witnesses. This form of dialectic has been used also by Kant who has tried with its help to show that popular metaphysical conceptions involve contradictions.

(*ii*) The positive, synthetic or constructive dialectic has been explained clearly by Hegel in his 'Science of Logic.' It is so called, because it is essentially a process of reconciliation or unification. Hegel points out that human thought proceeds dialectically, *i.e.*, its movement involves a process of contradiction and reconciliation. We know that an idea can be understood only in relation to its opposite or contradictory. We can understand A as A, *i.e.*, we can give it a definite meaning only by contrasting it with something which is not A (cf. the Psychological Law of Relativity). If we begin with the thesis or affirmation that A exists, we cannot avoid passing over to the antithesis or counter-affirmation that not-A exists; and this antithesis is just as certain as the thesis. The thesis and the antithesis exist by contrast with and in dependence on each other. A supposes its correlative or opposite not-A. But the opposition between the two drives the mind on to seek their reconciliation in a higher unity or synthesis, say B. B, again, is a thesis which supposes the antithesis not-B; and these, again, in their turn, are reconciled in a higher synthesis. In this way thought moves onwards till it reaches the highest or the absolute synthesis which comprehends and reconciles within itself all contradictions or oppositions. If we carefully examine the working of our minds, we find that our thought invariably proceeds from position to negation and thence to a higher position—from a thesis to an antithesis and thence to a synthesis—from an affirmation to a counter-affirmation and thence to their reconciliation. When, for example, we perceive the table before us, our knowledge of it as a table implies its differentiation from other articles, such as chairs, benches &c. But this distinction involves an agreement—a higher unity—under which such things are brought, *viz.*, furniture. The idea of furniture, again, leads the mind to the idea of something standing in contrast with it. It is intelligible as distinguished from, say, the room or building, its walls, floors etc. But this distinction, again, implies an agreement, *viz.*, that all of them are solids. The idea of solidity, again, carries the mind to its opposite,

viz., liquidity, and these, again, lead to the higher idea of matter. Matter, again, can be understood only through its distinction from mind, and both of them again are brought under the higher idea of Being. We thus find that the movement of human thought is dialectic.

It should be borne in mind that, according to Hegel, the dialectical process is not a mere logical process or process of human thought. It is the process of the world as a whole. Dialectical evolution is the law of the whole universe. The evolution of everything in this world and of the world as a whole takes place through the dialectic process of thesis, antithesis and synthesis—homogeneity, differentiation and integration. Indeed, this dialectical process is the means by which the ultimate being or reality realises its own nature. It makes explicit or unfolds the opposite or different potentialities and tendencies latent in its nature, reconciles them in higher syntheses, and thus evolves the world-system and realises itself as a concrete self-conscious spirit. Human mind proceeds dialectically, because it is essentially a reproduction of the Absolute Reality which is a mental being proceeding dialectically and realising and expressing itself in and through the dialectical evolution of the universe. Now, since human thought is a reproduction of reality, the essential laws and categories of human thought must be inherent in the nature of reality itself.* (*Vide* the Critical Method; page 23). Hence, in the essential laws, categories, or concepts of human thought, we have a key to ontological truth. To borrow the words of Dr. Paulsen, "the dialectic development of concepts is only the subjective repetition of the objective process of the Idea—i.e.—the ultimate reality itself." This being the case, we can have a true knowledge of reality from the dialectical development of concepts. This, according to Hegel, is the importance of the dialectic method in the study of philosophy.

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* Hence Logic which is an enquiry into the nature and essential laws of thought becomes identical with Metaphysics which is an enquiry into the nature and laws of realities.

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CHAPTER II.

NATURE AND OBJECT OF KNOWLEDGE.

(THEORIES OF THE WORLD).

§ 1. **Preliminary Remarks.** We have seen before that Epistemology deals with knowledge. But different theories of the nature of knowledge lead to different theories of the object of knowledge. Knowing cannot be isolated from what is known. Hence in the present chapter we have to consider the principal theories of the nature and object of knowledge. Some suppose that our knowledge is an exact copy of the extra-mental reality—that our ideas are exact representations of objects outside our minds (Realism—Common Sense view). Others suppose that our ideas can have no resemblance of kind to the extra-mental world of reality (Agnosticism, Phenomenalism). Others suppose that there is no extra-mental world. Of the thinkers who suppose that there is nothing extra-mental or outside of mind some are of opinion that the world of things has no existence except in the consciousness of finite minds (Extreme Subjective Idealism); others maintain that the world of things is evolved by and exists in an Absolute and Universal Mind, and our conception of the world is a reproduction, in terms of finite mind, of what has been produced already by the Absolute Mind. It will be seen that this theory explains knowledge better than the other theories; for, according to it, our ideas have some resemblance to, and community of kind with, the things themselves, as both are mental products evolved and maintained by mental power. We should now consider these theories fully.

§ 2. Different theories of the nature and object of knowledge.

I. *Realism.*

(*a*) *Popular Realism.* (It is the doctrine that there is an extra-mental reality—*i.e.*—a world of reality external to and independent of mind, and that mind exactly knows the world as it is in itself.) "Our ideas are exact copies of external real things, much in the same sense in which pictures are copies of the originals, or in which images in a mirror reflect their causes." In other words, our ideas represent qualities which are seated in the things themselves. The object which is outside, and independent of, our consciousness agrees in all respects with the image or conception that we have of it within our minds. Thus in perception we become acquainted with the true nature of things—with their essential attributes as they exist independently of our minds.

distinction between the two.

This is the 'common sense view' of knowledge. It is called Popular Realism. (The popular belief is that things exist outside and independently of our minds and will exist all the same whether there is any mind to think them or not, and that we perceive things as they really are in themselves.)

(*b*) *Modified or Corrected Realism* (*Scientific Realism*). (It is the doctrine which draws a line of distinction between primary and secondary qualities and assumes that, in so far as the primary qualities are concerned, our ideas are exact copies of what exist objectively or outside of our minds; while the secondary qualities are only states of our consciousness which cannot have any resemblance of kind to anything outside of it.) How, then, are we to distinguish between primary and secondary qualities? It is maintained that certain qualities are essential to the very conception and existence of material things as such. These qualities make material things to be material and distinguish them from non-material things. They are extension and impenetrability in their various modes. There are other qualities, again, which are non-essential and variable, such as colour, taste, temperature, sound. These are called secondary. It is argued that our conceptions or ideas of things are exact copies of things in respect of the primary qualities, but in respect of the secondary qualities there can be no resemblance of kind between our conceptions of things and the things themselves. In other words, the primary qualities are objective—they are actually and objectively in the things (considered as extra-mental realities independent of our sensations and ideas). These belong to the very nature of things themselves. But the secondary qualities are subjective, *i.e.*, they exist only in our consciousness. The sensations that we have of them are of course occasioned by and correspond to powers or qualities inherent in the things, but they do not resemble those powers or qualities. ("The external world outside of our minds is neither light nor dark, neither silent nor resonant, neither hot nor cold, but extended and impenetrable.")

This theory was held by Locke and also by philosophers of the Intuitionist School (Reid, Hamilton). It is also generally accepted by physicists who maintain that, corresponding to our consciousness of the secondary qualities, there are in the objective world different arrangements and movements of atoms and molecules, waves of atmosphere and ether, chemical disintegration &c. Now, there is evidently no resemblance between the states of our consciousness known as sensations and such objective changes.

II. *Idealism.* The above theory of modified Realism is a step towards Idealism. Further reflection shows that even the primary qualities are known in terms of sensations which are only mental states. If the secondary qualities are only modifications of consciousness, the primary qualities also must be regarded as such, for they originate in the same way, *viz.*, by the mind's reaction against external influences. If the secondary qualities do not resemble what actually exist in the objects themselves and are only subjective, the primary qualities, too, may be so. As Dr. Paulsen very aptly observes: "The distinction between primary and secondary qualities cannot be adhered to. Extension, solidity and motion are no more absolute qualities of things than colours or sounds. The same arguments that lead us to refer the secondary qualities to the subject compel us to assume the subjectivity of the so-called primary qualities. We get our ideas of them from the same source, from perception, or at least not without perception. Without the sense of sight and the sense of touch, we could no more talk of extension and solidity than of sounds without hearing......Hence corporeality is a constituent of Perception." (*Introduction to Philosophy*, pp. 346, 347).

Hence many thinkers have rejected the theory of modified or corrected Realism and have accepted what is called Idealism. Some have denied altogether the existence of an external material world in the sense of an extra-mental world (Complete Idealism, subjective and objective). Others have maintained that there *is* an extra-mental world, though our conception of the world can have no resemblance of kind to it (Phenomenalistic Idealism of Kant and others).

(*a*) *Berkeleyan Idealism.* George Berkeley, a distinguished idealist, denies the existence of any transcendent extra-mental reality. According to him, material bodies are only ideas; their existence consists in their being perceived by some mind (*Esse* =*percipi*—to exist=to be perceived.) The existence

of extra-mental bodies is only a dogmatic and superfluous assumption. Instead of supposing that mind is in the world, we have rather to suppose that the world is in mind.

But this assumption raises some important questions. If things be only ideas in our mind, will they cease to exist when we cease to think of them? It appears at first from what has been said by Berkeley that they do not exist independently of our thought. How can we explain the apparent objectivity, independence, permanence and unity of the world consistently with this theory?

Berkeley answers such questions fully in his later writings. He says that, in order to explain the permanence and unity of the system of ideas which we call the world, we must assume an absolute and universal mind which has evolved the world by the energy of its own thought, and in whose thought it exists permanently, and from whose thought it is transferred to and partially reproduced in the finite minds of men. Thus things are ideas of the Divine mind, and what we call external perception consists in the reproduction, in our own minds, of the ideas of the Divine mind. Perception consists in the "seeing of all things in God"—"a looking into the contents of the Divine mind." "Every unthinking thing is perceived by some mind; if not by a finite created mind, yet certainly by the Infinite mind of God".*

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* The theory of Berkeley may be summarised in the following words of Prof. Marvin: "The Divine mind perceives the world in its fullness or completeness and causes finite minds or spirits also to perceive certain portions of it. The law and order of Nature are ultimately the law and order of the perceptions that God causes in us. But the material world does not exist except as the content of perception. There is no such thing as matter apart from mind. There are simply spirits and manifestations of spirits which we would call states of consciousness" (*Introduction to Philosophy*, p. 201).

We have given above a general account of Berkeley's theory as it is commonly understood now-a-days. But Berkeley in his earlier writings sometimes speaks as if the world had no existence except in our finite minds. God creates or raises in our minds the ideas which constitute things, and these ideas exist only in our own minds where God creates them, and not in God's mind. In other words, God creates the world as a system of ideas in the minds of men merely, so that the world has no existence except as a system of human ideas. Every time that we open our eyes the omnipresent power of God creates the things which we perceive—*i.e.*—the visual ideas which are presented to us. What exists in the mind of God is not the world as a sytem of ideas, but only the power and will which create the world in human perception. This is complete Subjective Idealism, because, according to it, the world exists only subjectively in finite minds. Prof. Weber seems to understand Berkeley in this sense.

Subjective idealism

In his later writings Berkeley distinctly says that God creates and sustains the world as a system of ideas within His own mind; and that our perception is a reproduction, from a finite point of view, of the ideas of the Divine Mind. This is supposed to be the true theory of Berkeley now-a-days. It gives an objective existence to the world. Fraser and many others understand Berkeley in this sense.

Objective idealism

How, then, are we to characterise Berkeley's Idealism? Is it subjective or objective?

To answer this question we must understand precisely the meanings of the two expressions Subjective Idealism and Objective Idealism. Subjective Idealism, taken in the strictest sense, means that the world of things has no existence except in the consciousness of finite minds. In other words, it implies that the world exists only as a system of ideas in the minds of finite subjects. Objective Idealism, again, taken in the strictest sense, means that the world exists objectively or independently of our finite minds, but it is evolved by and contained in the universal mind of God. In other words, it implies that the world is created and sustained by God as a system of ideas in His own mind, and that our perception consists in the reproduction of the ideas of the Divine Mind in our own minds. Now, if this be the true distinction between Subjective Idealism and Objective Idealism, then Berkeley's earlier theory may be called Subjective, and his later theory, Objective.

But it has become customary now-a-days to regard Berkeley's theory, whether in its earlier or later form, as Subjective Idealism and to look upon the Idealistic theory of Hegel and the Neo-Hegelians as the true form of Objective Idealism. How, then, does the Hegelian theory differ from the later Berkeleyan theory? Like the Berkeleyan theory in its later phase, the Hegelian theory also supposes that the world is evolved from, sustained by, and included within the all-embracing energy and consciousness of God or the Absolute Mind. But the peculiarity of Hegelian Idealism is that, according to it, the evolution and maintenance of a world of things are contained in the very nature of God or the Absolute—that the existence of a world is essential to His concrete self-conscious life. God realises Himself as a concrete self-conscious subject in and through the world of objects evolved and sustained by Himself. (*Vide* Ideal-Realism, p. 38). But Berkeley and his followers do not suppose so much. They seem rather to assume that God as a thinking *subject* may exist without a world as the *object*—that the existence of a world of things is not at all essential or indispensable to His conscious life, but is dependent on an act of choice on His part. Hence their theory may be called *subjective*, though in a different sense.*

(b) *Phenomenalistic or Transcendental Idealism of Kant.*

Kant maintains that there is an extra-mental world of reality—a world of things-in-themselves independent of our mind—which is the ground and occasion of our sensations, and that our sensations, in their changes and relations, correspond in some way to the things-in-themselves, but there can be no resemblance between our sensations and ideas which are mental, and the things themselves or realities which are extra-mental. The transcendent world—*i.e.*— the world of reality which transcends experience —imposes certain impressions on the mind through the organs of sense; and mind which is essentially active and constructive transforms them into its sensations by an act of (sub-conscious) reaction, applies to them certain *a priori* fundamental notions which it supplies from within and thus constructs its conception or idea of the external world of things. Nevertheless Kant's theory is essentially agnostic; for the sensations are only mental states and products of mental reaction; and the *a priori* notions which are applied to sensations are also of purely mental origin— they are only the forms under which mind necessarily represents things to itself in terms of its sensations, and they have no application to and community with the things which are extra-mental. It follows, therefore, that the world, as we think it, is only a world of mental construction—a world of thought—a phenomenal world having no resemblance to, or community of nature with, the world of

active idealis

Types idea

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* Prof. Kulpe points out that no philosopher has worked out a logically consistent theory of Subjective Idealism. It is customary to cite Berkeley and Fichte as representatives of that school, but, as is well known, both assume the existence of an Absolute mind or ego.

things-in-themselves which must remain unknown and unknowable.* (See *Criticism*, pp. 21, 22).

Thus, according to Kant, our knowledge is entirely phenomenal. Our ideas are not true representations of things as they are in their essential nature. They can be only signs and symbols of something unknown and unknowable.

(c) *Extreme form of Subjective Idealism or Solipsism.*

The logical consequence of the theory of knowledge worked out by Kant may be an extreme form of Subjective Idealism. We have seen before that, according to Kant, the *a priori* notions, such as the ideas of substance and causality, have no application to things-in-themselves. But he himself applies the category or notion of causality to them and says that they constitute the ground or cause of our sensations. Now, here there is an inconsistency. He says that the idea of causality cannot be applied to things-in-themselves, and yet he himself invests them with causality. The contradiction may be avoided by supposing that things-in-themselves have no causality and cannot affect our mind in any way. But then it is possible to advance a step further and deny altogether the existence of extra-mental things. If they cannot affect our mind, how can we infer even the mere fact of their existence? We have no means of knowing that there are things-in-themselves beyond our experience. Nay, we have no reason for assuming their existence. To every one of us the world of ideas is the only reality. I create my own ideas and am shut up within the circle of my ideas. I cannot go beyond my ideas and know any transcendent reality. The transcendent world is to me only a zero. To use the words of Dr. Paulsen, "My world of ideas constitutes the only reality; beyond that there is nothing." This is called the doctrine of Solipsism which literally means "the self alone exists". (*Solus*=alone, *ipse*=self).

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* Hence the expression ascribed to Kant, that mind *makes* Nature, though it does not *create* it. Thus his theory bears a very pronounced Idealistic stamp. It may be pointed out in this connection that Kant sometimes spoke of 'one thing-in-itself'. In the first edition of the Critique of Pure Reason he even suggested that the one thing-in-itself might be mental. We see, then, that his philosophy contained the germs of Post-Kantian Idealism.

(d) *Ideal-Realism or Objective Idealism.*

The extreme form of Subjective Idealism known as Solipsism is an absurd doctrine. A doctrine which asserts that there is no reality beyond the self and its ideas fails to satisfy the human mind. Even the moderate form of Subjective Idealism as explained by Berkeley cannot give a satisfactory reason for the existence of the world. Hence a better theory is necessary. Now, what is known as Ideal-Realism or Realistic Idealism is highly satisfactory both as an epistemological and an ontological doctrine. A general account of this doctrine is given in the present section.

According to this theory, the ultimate reality is essentially a mental being which realises itself as a concrete power and a self-conscious spirit by evolving and sustaining the entire world of finite things and minds. All finite things and minds "live and move and have their being" in the Absolute, and exist for the sake of one ultimate end, *viz.*, the self-realisation and self-manifestation of the Absolute. The human mind is a reproduction or reduplication of the Absolute Mind and shares in its nature; and what is called the material world is not anything opposed to mind, but is only a manifestation, expression or product of the same Absolute Mind that reproduces itself finitely in man. It follows from this that knowledge is not symbolical, but gives a true representation of the world of reality. The external material world can be perceived and comprehended by the human mind, because matter is the product of a mental power.) (*Vide* pp. 23, 24).

The foregoing remarks make it clear that this theory explains knowledge more adequately than any other theory. Man can know the realities, because the ultimate reality—'the reality of all realities'—is itself mental and reproduces itself in the human mind. As Dr. Paulsen observes, "I know reality as it is in itself in so far as I am that reality myself." Thus it is the most satisfactory epistemological doctrine. It incorporates into itself whatever elements of truth are contained in the other theories. It asserts the reality or objective existence of the external world and is thus far realistic; at the same time it derives the world from one Absolute Idea or Thought and is thus far idealistic. Hence it may be called *Objective Idealism, Idealistic Realism, Realistic Idealism* or, briefly, *Ideal-Realism*. As an ontological doctrine it gives a sufficient reason for the existence of finite beings. Finite things and minds exist as necessary factors of the life of the Absolute. They are the means and materials of Divine consciousness. A subject without an object, a thought without anything to think about, an act of willing without willing anything, a self-consciousness without a plurality of materials, must be viewed as impossible. Hence God as a self-conscious, active, thinking subject requires a world of finite things and minds. How can there be a life without activity, or an actual power without any expression? We must suppose that the evolution and preservation of a world of finite beings is an essential part of Divine life. God is the Absolute subject without relation to whom no object can exist and whose own existence as a real self-conscious power depends upon His manifestation in the universe of inter-related objects. An eternal world or series of worlds is implied in the eternal life and consciousness of God. God apart from the world of finite things and minds would be an abstract potentiality, and not a concrete living power. Thus finite beings have a *real existence*, though their reality is *relative*, *dependent* or *conditioned*.*

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* This theory may be called Panentheism, because, according to it, all beings are in God. (*Pan*=all, *en*=in, and *theos*=God). It is otherwise called Concrete Monism or Monistic Idealism. It is substantially the view of Hegel and his followers, such as Stirling, Green and Caird. For a full account of this, see Chapters XX and XXI of this book.

CHAPTER III.

ORIGIN OF KNOWLEDGE.

§ 1. Preliminary remarks. The problem of the origin of knowledge is one of the fundamental problems of Epistemology. Hence it requires a special consideration. Epistemology ultimately comes to the conclusion that human mind is essentially an active, synthetic, rational principle and that our knowledge of the world results from the co-operation of two factors—experience and reason—the one entering the rational mind or thinking subject from without, and the other operating from within the mind itself. Knowledge has its origin in experience interpreted by reason. Experience means what is impressed from outside in the form of sensations—influences which enter the human mind from without. Reason means the self's inherent power of interpreting or understanding. The different faculties of intellect are all applications of reason. Now, knowledge requires a combination of the two. Without reason, experience would be a series of meaningless states; without experience, reason would be an empty form. Thus neither experience nor reason can give us knowledge by itself. The sensations are only the raw materials of knowledge—they can be transformed into knowledge only when interpreted by the self through its rational power. In other words, knowledge of the world is 'rationalised experience.' If this rational power were wanting in man, the sensations would be as meaningless to him as 'a picture is to a lower animal or a printed page to an illiterate person.' Human mind reacts upon the influences imposed upon it from without, transforms them into sensations and builds up out of them its conception of the world; and it understands and believes that this conception of the world constructed by itself corresponds with the world of realities. This correspondence can be accounted for only on the supposition that the finite reason which constructs this conception of the world is a reproduction of the universal reason that evolves, and is immanent in, the great world of nature (See pp. 23 & 24 and pp. 38 & 39).

We have given above a brief account of the rationalistic and idealistic theory of the origin of knowledge; and this, as we shall find later on, is the most satisfactory theory. But the question of the origin of knowledge has been the subject of a long controversy. Some have gone so far as to suppose that all knowledge is derived from sense-experience alone and that "there is nothing in intellect which was not previously in sensation." (Locke). According to these thinkers, sense-experience is the only source of knowledge. This is extreme Empiricism. It is otherwise called the *a posteriori* theory, because, according to it, all knowledge is posterior to and derived from experience. Extreme Rationalism, again, supposes that genuine knowledge comes from reason alone and the pursuit of true knowledge consists in clearing away the more or less illusory ideas derived from sense-experience. Attempts have been made by different thinkers, ancient and modern, to find out the exact contributions of reason and experience to knowledge. Their theories are separately considered below.

§ 2. Different theories of the origin of knowledge.

1. *Empiricism.* As has been said before, according to this theory, knowledge is entirely built up of sensations and materials derived from sensations. Locke who is an advocate of this view supposes that the mind of every individual at the time of his birth is like a blank tablet or sheet on which everything has to be written by experience. Thus all the contents of the mature mind are acquired through experience which is the sole source of knowledge. Reason contributes nothing to knowledge. Knowledge is entirely built up of experience and elaborations out of experience. Mind passively receives impressions from without, and out of the impressions thus forced upon it, all its ideas are built up. There are no *a priori* elements of knowledge or innate ideas. If there were any ideas innate in the human mind, they would be common to all human beings, including children and savages. But do we find any such common ideas? Surely not, argues Locke. Thus, according to him, Empiricism is the only true theory of the origin of knowledge.

The peculiarity of Locke's philosophy is that it is *empirical*, but *not sceptical* or *agnostic*, for it does not deny the possibility of metaphysical knowledge.* But Hume and his followers are of opinion that a consistent empirical philosophy must be sceptical. Scepticism is the natural and necessary consequence of a thorough-going empiricism. (See pp. 20, 21). If knowledge is wholly made up of sense-elements and contains nothing more, as Locke points out, then nothing can be known about anything lying outside the sphere of sensations. Things are to us only actual and possible clusters of sensations. We can reason from past sensations to future sensations, but never to anything beyond sensations. All attempts to know the realities beyond experience should therefore be abandoned. Knowledge grows up through accumulation and association of sensations. Sensations spring up (we do not know whence, how, why), and they associate themselves together into clusters, and these clusters into more complex systems, thus building up the contents of mind and our conception of the world. Mind as known to us is not a substance having activity of its own. It is only the aggregate of sensations and ideas which, again, are only associated and reproduced sensations. We speak of material *things* existing in such and such places and times, but the more precise statement would be that, under certain conditions, we shall have certain clusters and series of *sensations*. We speak of one thing *causing* or *producing* another, but the more precise statement would be that one cluster of sensations is *always* or *invariably followed* by another. Thus the cause of an event simply means its invariable antecedent. We do not know of any productive energy seated in the cause or of any bond of connection between the two events called the cause and the effect, which makes it *necessary* that the latter must follow the former. Our belief in the law of causation is brought about through association of ideas. If we find in our experience that a certain antecedent, say A, is invariably or uniformly followed by a certain consequent, say x, the ideas of the two become inseparably associated, so that, when we again find A or think of it, we remember x and expect that x will follow. All general propositions including the axioms are generalisations from particular facts of experience. The axioms appear to be different in kind, because they are drawn earlier in life than other inductive generalisations and are based on a wider range of facts. There are no *a priori* elements of knowledge and no absolutely necessary and universal truths discerned intuitively. Knowledge is entirely restricted to sensations and their orders of occurrence—co-existence and sequence.*

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* See Note at the end of this chapter. It may be added here that the possibility of metaphysical knowledge has been admitted by other older empiricists, *e.g.*, Bacon and Hobbes.

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* This theory has been variously named. It is called (i) *Sensationism*, because it reduces all knowledge to sensations—original, and those revived and recombined into ideas; (ii) *Scepticism*, because it doubts or denies the possibility of knowing anything beyond experience; (iii) *Agnosticism*, because, according to it, we do not and cannot know the realities; (iv) *Pan-phenomenalism* (or, simply, *Phenomenalism*), because, according to it, all we can know are *phenomena* or appearances of things to our experience, and not the things or realities; (v) *Associationism*, because it makes much use of the laws

The above is a general account of the empirical theory of Hume and his followers, *e.g.*, Mill. But the empirical tendency has run through the whole history of thought from Democritus and Protagoras in ancient times down to Bacon, Locke, Hume, Comte, James Mill, J. S. Mill, Bain and Spencer in modern times. Spencer's theory is essentially empirical, but it is modified by his theory of Evolution (See pp. 49, 50).

Criticism. A little reflection is sufficient to show that empiricism is not a sound theory of the origin of knowledge. Experience must be *rationalised*, *i.e.*, interpreted by *reason* before there can be knowledge. External experience gives only sensations, but we can have knowledge of things only by interpreting or understanding the meanings of sensations; and this can be done only by applying to them certain notions which we, as rational beings, evolve from our own minds. It is impossible to think of the world in terms of sensations merely. Our conception of the world involves certain fundamental notions or ideas which are not derived from sensations. We think of the world as a system of substantial things external to one another and to ourselves, and standing to one another in relations of reciprocal causality, interdependence and co-operation as factors of one organic whole and manifesting themselves to us and producing in our minds the states known as sensations. Now,

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of association and makes things to be but clusters of associated sensations; and (vi) *Positivism*, because it accepts the so-called *positive* facts of experience, and rejects all speculation about anything beyond experience. It may be added here that the word 'Positivism' was first used by Comte and his followers. It should be borne in mind that the sceptical or agnostic system in its most consistent form does not deny the existence of realities, nor does it assert their existence; it really assumes a neutral position with regard to them. The semi-agnostic philosophy of Kant asserts the *existence* of realities, but it assumes that they are unknown and unknowable. Similarly, Spencer says that there *is* the Absolute, but it is unknown and unknowable in its nature. (See Ch. V).

an analysis of this conception of the world will show that the notions of space, time, causality, substance and the like are involved in it. (See Ch. IV). These notions are not given by the sensations. They are supplied by the rational principle from within itself. Thus knowledge involves *a priori* elements, *i.e.*, elements which are not derived from sensations. In fact, knowledge requires a combination of *a priori* and *a posteriori* elements, *i.e.*, elements supplied by *reason* as well as those supplied by *experience*.

The advocates of the theory known as Phenomenalism, Scepticism and Agnosticism contend that only argue the phenomena are known, and not the realities. But the truth is that phenomena without noumena or realities are mere names devoid of any meaning. In knowing the phenomena we know the underlying realities which manifest themselves in and through them. Thus the self is known in and through the series of conscious states, the material world in and through the sensations, and the Absolute in and through the existence and history of the world of mind and matter. (See Ch. V).

Thus Rationalism or the *a priori* view is justified. (See § 1 of this chapter).

II. *Rationalism* or the *a priori* theory.

We have said above that the *a priori* theory is justified. But in History of Philosophy we find that it has assumed various forms. A brief synopsis of each form is given below:

(1) The theory of *innate ideas* as held by Plato, Descartes and their followers.

According to these thinkers, there are certain fundamental notions or ideas which cannot be derived from the materials of sense-perception, *e.g.*, the ideas of space, infinity, eternity, perfect being, and so on.

Such ideas can be accounted for only if we suppose that they are *innate* or *inborn* and contained in the mind at the time of birth. The ideas or notions that are innate in us (or connate with us) remain in a latent or implicit condition until drawn out or rendered explicit by the needs and requirements of rational thought and practical life. Human mind is so constituted or framed that, when prompted by experience, it necessarily evolves, elicits or supplies such notions and beliefs from within itself to supplement and explain experience.

(2) The theory of *natural* and *instinctive beliefs*. Human mind has been so constituted by its author from the beginning that it spontaneously accepts and believes certain propositions as soon as they are presented to it, even though it may not be able to see or explain why it believes in them, *e.g.*, the being of God, immortality of soul, the existence of an external material world, the axioms of Mathematics and other sciences, the moral laws or laws of duty, &c. Our beliefs in them are natural, instinctive and necessary.

(3) The theory of *self-evident intuitive truths*. According to this view, as rational beings we are endowed, not only with the power of *reasoning* or *inference* (sometimes called *discursive reason*), but also with that of *intuition* (sometimes called *intuitive reason*) which means the capacity of *immediate perception*, *insight* or *discernment* (without the intervention of *reasoning* or *inference*); and we believe in certain general propositions (axioms or first principles), not because the ideas which they involve are innate in us, nor owing to any blind instinctive necessity of belief, but because we *directly and intuitively perceive them to be true*. We get the ideas of the things which form the terms of these propositions from experience, like other ideas; but having once obtained the ideas of the things, we discern at once what is universally and objectively true of them without the help of reasoning

or inference. Such judgments neither admit of any demonstration, nor need any, simply because they are *immediate* truths of intuition, self-evident in themselves as facts of perception.

Thus, from experience we obtain ideas of points, straight lines, events &c., and of one event causing another; but our intuitive reason or power of intuition enables us to go beyond these particulars and to perceive that *no* two straight lines can enclose a space, that *all* events have causes &c. In other words, reason intuitively discerns some necessary and universal truths concerning particular things or objects of experience, and these universal and self-evident intuitions of reason are the ultimate premises or first principles from which reasoning starts and which constitute the basis or foundation on which inferential knowledge rests.

This theory which involves an element of truth has been held by the philosophers of the Common Sense or Intuitional School, such as Reid, Hamilton, Cousin and many others. But it has sometimes been combined with the second theory explained above, *viz.*, the theory of natural and instinctive beliefs.

(4) The theory of *a priori forms and categories inherent in the nature of thought*, as propounded by Kant. (See pp. 21, 22 and pp. 36, 37). Knowledge consists, not in the passive reception of impressions from the external world, but in the active interpretation of these impressions according to forms and laws inherent in the nature of the rational mind. The human mind is essentially active and rational and must think and represent things according to certain *a priori* notions supplied by it from within itself. These include (*i*) the forms under which things are represented in sensation, *viz.*, the forms of space and time; (ii) the forms under which we understand things, *viz.*, the categories of unity and plurality, substance and accident, cause and effect, possibility and necessity &c., and also (iii) the axioms or necessary judgments rising out of these.

Kant holds that they are only *empirically* true, and *not metaphysically*, *i.e.*, they have meaning and application only within the range of experience and do not apply at all to things-in-themselves, which are unknown and unknowable. In other words, according to him, they are true of the phenomenal world of human thought, but cannot be said to be true of the unknown real world. Kant's critical theory of knowledge thus ends in Dualism and Agnosticism; for, according to it, there are two worlds—a world of thought or experience and a world of realities or things-in-themselves, the former being known and the latter unknown and unknowable.

(5) *Post-Kantian Ideal-realism*. The Post-Kantians (*e.g.*, Hegel) try to overcome the above Dualism by assuming that *thinking* and *being*—*thought* and *reality*—are ultimately identical. They hold that the ultimate reality is a thinking being evolving and supporting the world of finite things according to laws of thought or reason, and human mind which thinks of the world according to its inherent laws is a partial reproduction of that being. Hence, according to them, the *a priori* forms and laws of thought must be objectively and metaphysically true of things also. (See pp. 23, 24 and p. 27).

The above is a brief account of the various forms of *Rationalism* or the *a priori* theory. But before concluding the section we must say something about—

III. The theory of *inherited experience* (*Evolutional Empiricism*). Spencer who is an evolutionist tries to reconcile the *a priori* and *a posteriori* theories of knowledge with the help of his doctrine of evolution. According to him, our beliefs in uniformity of nature, the law of causation, axioms of Mathematics &c. are innate and instinctive in us, but they have really been generated by the accumulated and uncontradicted experiences of innumerable generations and transmitted to us according to the law of heredity. To our remote ancestors, knowledge was wholly *a posteriori* or experiential, but to us who have inherited the results of the accumulated experience of all the ancestors, knowledge is partly *a priori.*

Criticism.

(1) Spencer's theory of knowledge is based on the doctrine of hereditary transmission of acquired powers and tendencies which many distinguished evolutionists now deny (*e.g.*, Weismann and his followers).

(2) Spencer's theory is, at bottom, empirical. It is really a modified form of empiricism, and the criticism of pure empiricism is applicable *mutatis mutandis* to the modified form. If the experience of one generation is unable to give rise to *a priori* ideas, the accumulated experience of many generations is also unable to do so. In fact, experience, whether personal or ancestral, whether individual or collective, can never create anything entirely new. "Mere antiquity or extended experience can never work miracles". "Heredity cannot call into being a new idea or tendency any more than it can teach the eyes to hear or the ears to see."

(3) The *a priori* or innate ideas and the materials out of which the ideas are said to be developed are quite unlike or heterogeneous, and it is inconceivable how the ideas can be developed out of such materials.

Conclusion:

From what has been said above it is clear that knowledge requires both *a priori* and *a posteriori* factors. Hence we may say that the Kantian theory involves an element of truth. But Kant goes too far when he supposes that the *a priori* forms and

categories are true only within the range of experience. We have to conclude on the contrary that they are objectively and metaphysically true. In other words, we have to suppose that the essential mental tendencies and laws correspond to the objective constitution of things. This view which is at once realistic and idealistic gives a sufficient account of knowledge.

§ 3. Origin and development of cognitive powers: Evolution and Dialectics.

An interesting question arises in this connection. How have the rational, cognitive or knowing powers of men originated? Have they been brought about by the action of the external world or environment upon creatures, or by self-evolution of the mental principle from within?

Two extreme views have been held with regard to this:—

(*a*) Development by influences from without.

The advocates of Naturalistic or Mechanical Evolution maintain that the environment acting on the human mind from without has moulded it in its present form. In other words, they hold that the human constitution has been made to be what it is wholly by external circumstances. From the very beginning, creatures have been subject to the influence of the external world acting on them and imposing on them new sensations and making them think and act in various ways. The new ways of thinking and acting thus imposed on the creatures from without were turned, through repetition, into permanent habits of thinking and acting, and were registered, so to speak, in their very constitution. These were transmitted to posterity in accordance with the law of heredity and went on accumulating and becoming stronger and stronger from generation to generation. They have now been inherited by us as innate, instinctive or *a priori* tendencies, capacities and impulses. What is called *reason* is nothing but a connected system of powers and tendencies generated in this way and handed down to us by the past generations of our race. It is a mistake to suppose that our rational power has existed ready-made and complete from the very beginning. On the contrary, it is wholly a product of evolution in the above sense.

The theory described above is sometimes called the theory of development by *epigenesis, i.e.*, by addition of modifications imposed upon individuals by the environment acting from without.

Criticism.

A little reflection shows that evolution cannot bring into existence a rational nature where there was a blank before. Heredity cannot evolve a rational nature out of non-rational elements any more than we can make up a positive quantity by the addition of negative ones.*

Hence we have to fall back on—

(*b*) The theory of the evolution or development of mental principle from within.

Thinkers of the Rationalistic and Idealistic school maintain that mental development is essentially *self-development, i.e.*, the unfolding of the latent capacities of mind from within. In other words, they hold that mind must develop itself from within, by making explicit the powers or capacities that are potential or implicit within itself. External environment undoubtedly prompts mental development, but it has not the power to create a new mental tendency or capacity. The life of every mental being involves a continuous struggle to adapt itself to circumstances, and in this

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* See p. 49, *Evolutional Empiricism*. For a full criticism of Mechanical Evolution, see Chs. X, XI (including the Notes) & Ch. XV.

effort the latent or implicit powers are differentiated and integrated. External experience only supplies the occasion and impulse.

We see, then, that the development of mind proceeds from within. External environment simply calls forth the latent capabilities of the self—it rouses, so to speak, the capacities that lie in a dormant condition within the mind. A mental being gradually unfolds its potentialities or implicit capacities in its attempt to adapt itself to the environment acting on it from without. The powers or capacities that are thus unfolded from within are transmitted to succeeding generations and go on accumulating from generation to generation. It is in this way that mental development takes place.

This may be called the theory of 'development by *dialectic* activity from within,' because, according to it, the self develops itself by differentiating and integrating its powers or capacities from within.

NOTE I.

DR. PAULSEN'S CLASSIFICATION OF THE RATIONAL THEORIES.

We have explained above the rational and empirical theories of knowledge. Dr. Paulsen distinguishes three forms of Rationalism. He says that it assumes

(1) Metaphysical, (2) Mathematical and (3) Formalistic forms.

According to him, Plato and Hegel are exponents of the first form; Descartes is an advocate of the second form, and Kant, of the third form.

(1) Dr. Paulsen points out that, according to Plato, only pure thinking can give us true knowledge of reality as it is in itself; for reality in itself is thought. To quote Dr. Paulsen's own words—"The world of sense-perception is not the real world; reality as such is an actual system of concepts or

thoughts—a world of ideas. How do we reach a knowledge of it? Plato's answer is not really epistemological, but in line with his metaphysics. The soul is something that is in its original essence homogeneous with the real reality. Its real essence is thinking or spirit. The soul does not appear in its earthly guise as what it is in reality, as pure thought. Here its nature is obscured or corrupted by the admixture of sensuous elements, by perception and desire."

Hence, according to Plato, the duty of every man is to do all he can to free thought from the senses which have buried it beneath falsehood and illusion. Reason alone can give us true or real knowledge. Sense-perception gives us false illusory ideas.

Hegelian Rationalism, though not exactly the same as the theory of Plato, is still classed as metaphysical, because, according to Hegel, thinking and being are ultimately identical. (See p. 49).

(2) Mathematical Rationalism of Descartes. According to him, true knowledge is deduced from certain fundamental principles or innate ideas, just as in Geometry our propositions are deduced from certain definitions, axioms and postulates. Hence it is called Mathematical Rationalism by Dr. Paulsen.

(3) Formalistic Rationalism of Kant. Kant distinguishes between the *matter* and *form* of knowledge. The matter or the materials of knowledge are supplied from without. The *a priori* forms are supplied from within. (See pp. 21, 22, and pp. 48, 49).

NOTE II.

THE EMPIRICAL SYSTEMS OF LOCKE AND HUME.

We have given above a general account of the empirical systems of Locke and Hume. We proceed now to explain and compare their theories more precisely.

Locke's philosophy has a *negative* and a *positive* side. *Negatively*, it is an attempt to show that there are *no innate ideas*. *Positively*, it is an attempt to prove that *all our knowledge springs from experience*.

Locke begins his essay on human understanding with an attempt to refute the theory that there are "innate ideas received into the soul at birth, and brought with it into the world."* The main proofs that he brings forward in denial of innate ideas and principles are briefly stated here. If there were any innate ideas, they would be equally present in the minds of all human beings including children, savages and idiots. If there were any innate principles, they would be universally assented to. If any propositions were innate in the mind, they would spring up in the mind without needing any previous experience or any process of reasoning. But Locke contends that there are no such universally present ideas; there are no principles that are universally admitted, whether in the theoretical or in the practical world; there are no propositions that spring up in the mind without any experience or reasoning. "Children and idiots have no conception of these principles, and neither do the uneducated know anything about such abstract propositions; how, then, can they be implanted in them by nature? Were ideas innate, we should all, of necessity, be aware of them even from our earliest childhood. For 'to be in the mind' is the same thing as 'to be known.' . . . . As little is gained by the plea that, as soon as men make use of their reason, they become conscious of these principles. This allegation is simply false, because the said axioms come much later into consciousness than many other particulars of knowledge . . . . The first facts of knowledge are not general principles, but particular instances (impressions). The child knows that sweet is not bitter, long before it understands the logical proposition of contradiction." (Schwegler, *History of Philosophy*).

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* Locke seems to have understood the theory of innate ideas in the crude sense that certain primary ideas or beliefs are stamped or impressed on the mind before birth, and these impressions are brought into the world with it and stored up in it like articles in a store-room.

But, as Prof. H. Stephen points out, "It was not really meant that such ideas are deposited in the mind from the outside, and stored up in it until needed, like articles in a magazine; but merely that we are born with a certain disposition and faculty, which both enables and impels us to construct these ideas from within ourselves, when they are needed to supplement what is supplied by experience from without, and build up a consistent system of knowledge." (*Psychology*, p. 396). We may say, then, that Locke does not do justice to the theory of *a priori* knowledge.

Thus, according to Locke, there are no innate ideas. The soul is originally an *empty tablet*. Experience is the source of all our ideas, the foundation of all our knowledge. Experience, again, is twofold: (*i*) *sensation*, giving us knowledge of external objects; (*ii*) *reflection* or *introspection*, giving us knowledge of internal facts. There is not in the mind a single idea that is not derived from one or both of these principles. Whatever knowledge we possess must be acquired through experience in the above sense, because there is no other way. Our ideas are either simple or complex. Mind receives the simple ideas through sensation and reflection, and forms compound ideas out of them.

What, then, is the range or extent of human knowledge? Locke is of opinion that the above means is quite sufficient to supply us with all the knowledge which we usually claim to have—scientific as well as metaphysical. Thus, from the internal facts of experience we know the substantial reality of our self; from our sensations, we know the existence of material things (agreeing with our sensations in the primary qualities); from the existence of self and the material world, we can infer the existence of God. We obtain our fundamental notions by generalisation and abstraction from experience; we arrive at the axioms or first principles by inductive generalisation from particular facts of experience.

Criticism. As pointed out before, knowledge involves certain *a priori* fundamental notions and principles which cannot in any way be derived from experience, but must be supplied by the rational self from within. The attempt of the empiricists to derive them from experience has always proved a failure. When trying to explain such ideas and principles empirically, these thinkers are always found to assume them tacitly. (See Ch. IV). Locke admits the existence of necessary and universal truths,

e.g., the principle of causation, but says that they are wholly due to experience. But is Locke right here? When we say "*every* event has a cause," are we not going entirely beyond the bare facts of experience in the statement? All that *mere* experience could possibly tell us would be that certain particular events in the past had their causes. It is evident, then, that such truths must be due to some capacity of the mind that goes beyond the mere collection of past experiences. It is not meant, of course, that experience has nothing to do with such ideas and principles. Though experience is not their source, yet it is experience that makes them explicit. Without experience these innate ideas would lie in a dormant condition in our minds. Just as soil is necessary for the manifestation of the germinating power of the seed, so experience is necessary for the manifestation of the *a priori* or innate ideas.

Hume carries the theory of Locke to its logical consequence. He denies altogether the possibility of metaphysical knowledge and the existence of necessary and universal truths. If we owe all our knowledge to experience, we cannot possibly have any knowledge of what lie beyond experience, or get any propositions that are universally and necessarily true. From the particular facts of experience such propositions cannot be arrived at (See pp. 43, 44).

Thus Hume takes away the very foundation of science. Kant restores validity to knowledge by making it subject to necessary laws inherent in the very nature of thought.

CHAPTER IV.

CATEGORIES OF KNOWLEDGE.

(THE IDEAS OF SUBSTANCE, CAUSALITY, SPACE, TIME).

§ 1. Preliminary remarks. When we analyse our judgments about things, we find that certain fundamental notions or ideas are involved in them. Such notions or ideas are called *categories of knowledge*. Different lists have been given by different thinkers; but *all* agree in maintaining that the ideas of substance, causality, space and time are the most fundamental. A brief account of the contents and origin of each of these ideas is given in the present chapter.

The term 'category' means what we predicate or affirm of something in thinking of it. Now, in thinking of a thing, we think of it as a *substance* having the *power of producing* changes in other things existing somewhere in *space* at a certain point of *time*. Thus the notions of substance &c. are involved in each judgment. But though all are involved in each judgment, all are not equally prominent in each. In some judgments the notion of causality may be sufficiently clear and other notions may be in the background. In some judgments the notion of time may be prominent, and so on. (See Appendix B).

We now proceed to explain the contents and origin of each of these ideas.

§ 2. The notion of Substance.

In thinking of the self and not-self, we have to apply to them the notion of substance and think of them as substances or realities. Here we have to answer two questions:—What are the contents or elements of the idea of substance? What is the origin of the idea, or how is the idea derived by us?

(*a*) *Contents of the notion.*

When we analyse our notion of substance, we find that the following elements are involved therein: (i) the idea of something permanent in the midst of change, *i.e.*, something that remains essentially the same through all its varying states, modes or forms, and gives them unity, continuity and connection, and সংহতি (ii) the idea of something as a seat or centre of energy. A substance is nothing apart from its qualities; and its qualities are simply its powers of acting upon, and producing effects in, other things; and it is through its qualities or powers that a substance manifests itself or makes itself known to us.

Hence we may define substance as a seat of energy, permanent in the midst of fluctuating states, and manifesting itself in different forms known as qualities or properties.

(*b*) *Origin of the idea of substance.*

(i) *Empirical account.* Empiricists try to derive the idea of substance from experience. The account given by some of them is as follows: In our experience we find that some simple sensations and ideas always present themselves together. But we cannot think them as self-supported or existing by themselves. Hence we have to suppose a substratum as their basis, underlying, supporting and unifying them. We give this "substratum" the name of substance.

This is substantially the view of Locke and his followers. According to them, we are driven to suppose something underlying, supporting and holding together the qualities implied in the sensations. This 'something' may be called a substance or substratum. It is an unknown something, *we know not what*.

But this account really assumes the idea of substance instead of explaining it. If the idea of substance is indispensable, as these empiricists seem to admit, but not given by experience, surely it must be something which the mind supplies from within itself. It is therefore *a priori*. Thus the empirical account involves a paralogism.

The account given by Mill is not more satisfactory. According to him, a substance is "a permanent possibility of sensations." But what is meant by the expression "a permanent possibility of sensations"? It evidently implies some abiding condition, ground or energy—something substantial—that makes sensations possible. As Professor Mitra observes, "Possibilities as futurities have only a subjective existence, unless accounted for by reference to the potentialities of an abiding energy believed to exist." (*Psychology*, p. 424). Thus we see that Mill tacitly assumes the idea of substance instead of explaining it. (*Vide* Ch. XVI, § 3).

We conclude, then, that the empiricists are unable to explain satisfactorily the origin of the idea of substance. We must, therefore, fall back on the rationalistic or idealistic account.

(ii) *Idealistic account*. According to idealistic thinkers, self-consciousness is the source of this fundamental idea. They maintain that the notion of substance is derived from the persistent consciousness of self as an abiding or permanent seat of activity in the midst of changing states and processes. They rightly point out that the self is clearly conscious of itself as a unity in plurality, as something permanent underlying change—that it cannot remember its past experiences without being aware of its personal identity. The conscious life of the self is a series of states and processes—sensations, ideas, feelings and volitions, but the self never identifies itself with the series; on the contrary, it is conscious of itself as a permanent subject having these states and activities. It understands that these states and activities are its

own changing manifestations occurring in time. It understands itself as a single reality—as one and the same being—of which the past as well as the present states and activities are functions.

Thus the idea of substance is derived from internal perception or self-consciousness; and what we call external perception consists in applying this notion of substance to sensations and understanding them as manifestations of a substance other than the self. It is assumed in popular realism and materialism that, in perceiving the external material world, we are most directly or immediately conscious of substantiality; and that, having got the notion of substance through external perception, we apply it to ourselves. But a closer reflection enables us to see that this view is erroneous. In external perception we get at the outset only sensations from without; and these are *variable* and *fleeting* mental states. Hence from them we cannot derive the idea of *permanent substance*. The only possible source of our notion of substance—of our idea of unity in plurality, identity in diversity, permanence and continuity in the midst of change, is our own self-consciousness.

§ 3. The idea of causality.

(*a*) *Contents of the idea*.

Empirical account. According to the empiricists, the cause of an event simply means its invariable antecedent. When we say that this is the cause of that, we mean merely that this always comes before that. Experience which is the source of all our knowledge gives us only phenomena with their orders of occurrence—co-existence and succession which, again, is either variable or invariable. Now, if in our experience one phenomenon is invariably or uniformly followed by another, the ideas of the two become inseparably associated in our minds, and we call the antecedent phenomenon the cause of the more than the idea and expectation that one event will be always followed by another (See p. 44). Our experience tells us nothing about any causal energy, power or force which is supposed to produce the effect, or about any link of connection between the cause and the effect. We know nothing of production and connection, but only of succession. This is the view of Hume, Brown and their followers.

Criticism.

The above account of causality is a superficial one. Reflection shows that our idea of causality includes much more than the mere idea of invariable succession. It involves also the idea of *productive energy, power or efficiency* and that of a *necessary connection* between the cause and the effect. When we say that A is the cause of X, we do not mean merely that A invariably precedes X; we mean also that A, by virtue of its inherent *power, produces* X; and we believe that there is an essential *connection* between the causal energy and the effect produced, so that when the cause occurs, the effect necessarily follows.

The inadequacy of the empirical account will be evident from the following considerations :—

(i) There are many invariable antecedents and consequents in Nature which are never regarded by us as causes and effects. In our experience, day is invariably followed by night, winter by spring, spring by summer, Monday by Tuesday, youth by age, flash by a report, and so on, yet we never think of the antecedent as the cause of the consequent. This shows that mere invariability of sequence does not constitute our idea of causality.*

(ii) If the empirical account were true, Inductive Logic itself would be unnecessary. We know that Inductive Logic lays down certain rules which enable us to find out those cases of invariable succession that are really cases of causation. Now, if causation implied nothing more than invariable succession, it would be unnecessary for us to apply any logical rule, and we would be quite justified in taking every invariable antecedent of an event as its cause. Thus the very existence of Inductive Logic proves that causation is more than invariable succession.

(iii) Sciences as well as common speech are full of dynamical terms, *e.g.*, force, energy, production, action and reaction, and the like. Supposing they have no meaning, how is it that they are universally used and cannot be avoided?

We conclude, then, that by causality we mean much more than mere invariability of succession. Invariable succession or sequence is only a mark, by which, under certain conditions, we can infer the presence of causality. A cause not only *precedes*, but also *produces* its effect; the effect not only comes *after*, but also comes *from* the cause; and so long as the cause is not counteracted, the effect is *inevitable*. Thus there is a *necessary connection* between the two.

(*b*) *Origin of the idea.*

Our next question is : How is the idea of causality acquired? How do we get the ideas of force, causal

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*J. S. Mill, the most distinguished of the followers of Hume, endeavours to overcome this objection (which was originally urged by Reid) by saying that it is not *every* invariable antecedent that can be called a cause, but only an *unconditional* invariable antecedent—*i.e.*, an antecedent which, without any further condition, is followed by the event in question—the sole sufficing circumstance whose presence makes the effect and whose absence arrests it—the antecedent on the occurrence of which the consequent follows without there being the necessity of any other condition. But this admission evidently implies that there is something more in causation than mere uniformity of succession—some essential link or bond of connection between the cause and the effect. Indeed, the notion of unconditionality is nothing but the notion of efficiency and necessary connection in disguise.

energy or productivity and necessary connection between cause and effect?

It is commonly supposed that we perceive force or energy directly as an attribute of external physical things. The reason for this popular belief is that we think of causation frequently in connection with external phenomena, such as storms, earthquakes &c. But when we closely consider the case, we find that, so far as external things are concerned, Hume's criticism is true and decisive. In the external world we perceive only one event followed by another; we do not perceive any force or energy, nor do we perceive any link of connection between the antecedent and the consequent events. We must, therefore, concede this much to Hume and his followers that, so far as the external world is concerned, we have no direct perception of anything that may be called force or causal energy. We do not perceive force; we perceive only the effect which it produces. Thus we cannot derive the complete idea of causality from external perception.

Whence, then, do we get the ideas of causal energy and connection, if not from external perception?

A careful reflection reveals that these ideas are obtained from internal perception or self-consciousness. We find that we are clearly conscious of ourselves as causes or agents, and of energy as an inherent attribute of ourselves. If we were not conscious of causal energy, power or efficiency in ourselves, we would never have any idea of it at all. We really extend the idea of causal energy to Nature by analogy and inference after having derived the idea thereof from self-consciousness or internal perception.

In what conscious processes, then, do we become clearly aware of causal energy as an attribute of ourselves? We become clearly conscious of it in our purposive volitions—in attention and movement. The self-consciousness accompanying these processes supplies us explicitly with all the contents of the idea of causality. Thus, the consciousness of the effort put forth by us gives us the notion of *energy* or *power*. Our consciousness of the changes that are brought about by our activity gives us the notion of *effect*. Finally, our consciousness of the fact that changes or effects are brought about by, and are thus far dependent upon, our own energy exercised in a definite direction, gives us an idea of the *connection* between cause and effect. Thus all the elements of causality are derived from self-consciousness accompanying voluntary activities. This is the most satisfactory account of causality and has been accepted by idealists and intuitionists in general (*e.g.*, Martineau, Mansel).

To sum up: our idea of causality which involves the ideas of productive energy and connection between cause and effect is derived, not from our experience of the outer world, but from the consciousness of our own activity. Every time that we put forth voluntary effort to control and concentrate our thought, or to produce bodily movements and thereby occasion changes in the outer world, we are clearly conscious of ourselves as exercising causal energy, and of the connection between our energy and the effect produced; and having got the complete idea of causality in this way, we extend it to Nature.*

§ 4. Space.

We next proceed to the idea of space. Two questions are to be discussed here with regard to this:—(i) What is implied in it? or what are the contents of it? (ii) What is the origin of it, or how is it derived and developed?

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* The final conclusion arrived at by idealists is that all causality in Nature is mental—that the ultimate cause is a mental being. See Part IV, Philosophy of God. See also Martineau's *Study of Religion*, Vol. I.

(a) *Contents of the idea of space.*

The world is conceived by us as a system of finite beings acting and reacting on one another in space and time. Thus the idea of space is a fundamental element in our conception of the world. Space is conceived by us as a condition which makes possible the simultaneous existence of finite things; for, finite things, to be finite, must be distinct from one another, and must act on and limit one another. Further, space is understood by us as the condition which makes the movement of things possible. It is also viewed as the underlying 'continuum' which holds all finite things and indicates their mutual relations. It is conceived by us as extending or stretching in three directions—length, breadth and depth—each of which is believed to be without any limit. Thus space is conceived by us as continuous and infinite or unlimited. It is impossible to suppose or set any limit to space; for the supposed limit must be *in* space, and so the limit vanishes. As Dr. Stout observes, "A spatial limit is the boundary line between one part of space and an adjoining part; it is a limit *in* space and cannot, therefore, be a limit *of* space." (*Manual of Psychology*, p. 514). Further, space is conceived by us as either *filled* or *empty*, *occupied* or *unoccupied*, *plenum* or *vacuum*.*

(b) *Origin of the idea of space.*

Two extreme views have been held with regard to this:—(1) *empirical, experiential, genetic,* or *a posteriori* theory; (2) *intuitional, rational, nativistic* or *a priori* theory.

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* The question whether there is such a thing as an absolute vacuum or void has been the subject of much controversy. (See History of Philosophy).

(1) *The empirical view.*

(i) *Non-evolutional.* The supporters of this view (*e.g.*, Hume, Mill, Bain) are of opinion that the idea of space is derived from *'motor experience'*, *i.e.*, experience connected with the movement of our limbs. They maintain that the complete idea of space (occupied and unoccupied) is really gained from the experience of *active touch* (*i.e.*, touch combined with muscle-feeling). We experience muscle-feelings of different kinds and degrees through the movements of our limbs, and from these experiences abstract a general idea of movement and its possibility. Empty space means nothing more than the possibility of free movement or unimpeded muscular activity. Extension or occupied space implies resisted movement or impeded muscular activity. An extended thing means a number of co-existent points* resisting motion through themselves and giving rise to the consciousness of impeded muscular activity. Thus, according to this view, spatial attribute is only an abstraction from muscular experience.

(ii) *Evolutional.* The theory of Spencer and his followers is essentially empirical, though it is modified by their doctrine of evolution. According to them, the idea of space was originally a product of motor experience, but in the later generations of the human race it has become innate and instinctive owing to the influence of heredity. Thus the idea of space, though inborn in us, is really the result of the collective experience of all our ancestors transmitted to us according to the law of heredity (See pp. 49-50). "I believe," writes Spencer to Mill, "the intuition of space, possessed by any living individual, to have arisen from organized and consolidated experiences of all antecedent individuals who bequeathed to him their slowly-developed nervous organisations; and I believe this intuition, requiring only to be made definite and complete by personal experiences, has practically become a form of thought, apparently quite independent of experience." (Spencer's *Letter to Mill*, quoted by Bain).

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* The idea of co-existence is gained through touch and sight. See Psychology.

(iii) James, Ward and their followers have tried to derive the idea of space from the quality of *extensity*, *massiveness* or *voluminousness*, which is found, more or less explicitly, in all sensations. As Prof. James remarks, "The quality of voluminousness exists in all sensations, just as intensity does. . . . This extensity (or voluminousness), discernible in each and every sensation, though more developed in some than in others, is *the original sensation of space* out of which all the exact knowledge about space that we afterwards come to have is woven by processes of discrimination, association and selection." (*Text-book of Psychology*, pp. 335-337).

Criticism.

(i) The empirical theory of Mill and Bain assumes the idea of space instead of explaining it. We have found above that, according to these thinkers, the idea of space is derived from the experience of movement. But we can have no understanding of movement as such without an antecedent idea of space. "Movement does not explain space; space explains movement." Movement means a change of position or transition from one part of space to another and is thus intelligible only in relation to space. In short, motion always presupposes space. Thus the empirical theory involves a 'vicious circle.'

The truth is that the idea of space is a necessary condition of our thinking the material world. The material world can never be apprehended or understood except by reference to the idea of space. We must conceive finite things as existing external to one another and limiting one another in space.

(ii) The above criticism of Non-evolutional Empiricism as explained by Mill and Bain is applicable also to the modified form of Empiricism known as Evolutional Empiricism and maintained by Spencer. (See page 50).

(iii) The theory of Prof. James is not more satisfactory. The peculiar quality of extensity spoken of by him is no doubt generally due to the extension in space of the external causes of the sensations in which the quality is found; but before we understand this as such, we must have already some idea of space and extension. Without this, the extensiveness of sensation would be but a meaningless difference of quality. As Dr. H. Stephen remarks, "This quality means nothing more than the *feeling* which results from the simultaneity of many units of impression, and is not known to have any connection with extension in space until the idea of extension has already been formed and applied to explain it." (*Analytical Psychology*, 3rd Edition, p. 406).

We conclude, then, that all the empirical explanations are unsatisfactory. We should, therefore, consider

(2) *The a priori or rational theory*. It assumes two main forms :—(i) *Phenomenalistic* and (ii) *Realistic*.

(i) *Phenomenalistic Rationalism* as explained by Kant and his followers. According to these thinkers, the idea of space is *a priori*, evolved by the thinking mind from within and applied to the sense-materials presented to it from without. These thinkers are of opinion that space, as understood by us, is only a subjective 'form' under which the thinking mind necessarily represents or conceives things. They hold that, constituted as it is, the thinking mind must conceive objects presented to it under the form of space—*i.e.*—as extended and as external to itself and to one another.. Thus space, as we think it, is not an objective entity existing by itself outside of our minds.

Popular Realism assumes that we are in space, but, according to these thinkers, space is in us. This is the phenomenalistic theory of space, accepted also by the advocates of extreme Subjective Idealism. Indeed, some thinkers go so far as to maintain that the idea of space is only an unavoidable illusion of our finite consciousness, and does not correspond in any sense to anything outside of our minds.

(ii) *Realistic Rationalism or Intuitionism* as explained by thinkers of the Common Sense School, *e.g.*, Reid, Martineau and Mc Cosh. According to these thinkers, there is real space outside of us, and we intuitively discern its existence. They maintain that, corresponding to the idea of space within, there is real space without. We have a direct perception of extension in space which is a primary quality of matter.

Popular Dogmatic Realism goes so far as to suppose that our idea of space is an *exact* copy of the real space outside of us, and that this real space will exist all the same whether there is any mind to perceive it or not, and whether there are things to fill it or not. Even if all the objects in space be annihilated, space itself will remain wholly unaffected.

Conclusion.

We have given above a brief account of the various theories of space. The question naturally arises in the mind: Which of these theories is the right one? Now, after what has been said above, it is easy to see that the empirical theories are not at all satisfactory. Neither the older empirical theory of Mill and Bain nor the more recent doctrines of Spencer and Professor William James can adequately explain the origin of our notion of space. It is significant that every one of the empirical theories assumes the idea of space which it pretends to explain. We must, therefore, fall back on the *a priori* theory and

see whether it yields a more satisfactory explanation. Now, a little reflection convinces us that this much at least is *a priori* in our notion of space: the self must necessarily, as a condition of its thought, think the objects of its thought as things *external* to itself and to one another. Thus the notion of the *mutual externality* of things which evidently implies the notion of space is an *a priori* and necessary one. In other words, the notion of space is essentially inherent in the nature of the thinking principle and is 'read into' the sense-materials instead of being taken out of them.

Thus the notion of space is essentially *a priori*. But here a new question arises: Has experience nothing to do with our notion of space?

In reply to this we must admit that it is through experience that our idea of space is developed, elaborated and rendered explicit. Experience does not *create* the idea, but it *unfolds* it. The necessary and *a priori* notion of the mutual externality of finite objects, when drawn out and rendered explicit by our experience of movement, becomes the complete notion of space. As a tree is the outcome, not of the seed alone, but also of the soil, so our knowledge of the world is the outcome of reason as well as experience—*a priori* as well as *a posteriori* factors. Just as soil supplies the condition for the manifestation of the germinating power of the seed, so experience supplies the condition for the manifestation of the innate and *a priori* notions and tendencies.

But here we must guard ourselves against a possible misunderstanding. Though we hold that the essence of the idea of space is evolved from within, still we cannot go so far as some of the extreme advocates of Phenomenalism and Subjective Idealism do. It has been pointed out before that, according to these thinkers, space is a purely subjective form of thought—it is only an unavoidable illusion, and does not correspond in any sense to anything objective or outside of our mind. It is, according to them, only a mental hue which colours the objects presented to the mind, but the objects themselves have not that colouring. But this is going too far. We must not suppose that space is wholly an illusion or a creation of our minds. The spatial order in which we view things is imposed upon us by, and corresponds to, something in the objective nature of things themselves. The very fact that the *a priori* 'form' of space is applicable to the 'matter' supplied from without shows that there is a correspondence between the inner and the outer. We may suppose, therefore, that, corresponding to the *a priori* notion or tendency, there is a real attribute in the things themselves.

The truth seems to be this: finite things, to be finite, must be distinct from one another and must act on and limit one another. Thus they must be co-existent with, and external to, one another in space and successive in time. In other words, finite things as such must exist in space and time. In fact, a substance or reality as such must preserve its existence; and finite substances or reals can preserve and maintain their existence by resisting and excluding one another. But such mutual resistance and exclusion which is the essence of finite reality implies existence in space. We see, then, that space is the possibility of (or that which makes possible) the simultaneous existence and reality of finite things. "To be real," as Prof. Wallace says, "it is necessary to be 'somewhat'—to be limited and defined. This is the necessity of finitude. Finite reality implies negation; it implies limitation, distinction, opposition. Everything finite has something else to counteract, narrow and thwart it. This is the price to be paid for rising into reality and coming to be somewhat." (*Logic of Hegel*).

We must, therefore, come to the conclusion that our notion of space is *a priori*, but it is not a subjective illusion.

We have said above that, corresponding to the *a priori* notion of space, there is a real attribute in the objects themselves. Thus our theory is idealistic and realistic at the same time. But though realistic, our theory does not go so far as popular Dogmatic Realism. Dogmatic Realism assumes that space is entirely independent of objects and of all perceiving minds—that it will exist all the same whether there is any mind to grasp it or not. But this is going too far. We have seen before that space is essentially the relation of the mutual externality of objects and their parts. Hence space cannot be eliminated from outward things cognisable by us. Further, the existence of things in space presupposes the unity of mind. There must be a unifying principle holding together and distinguishing the objects in space; and this unifying principle must be the unity of mind. But it is not the finite mind that is the ultimate unifying principle of the world of things in space; it is the unity of absolute self-consciousness, of which the finite mind with its inherent laws is a reproduction. The Absolute Mind, in evolving finite material things, necessarily imposes on them the form of space; and the finite mind as its reproduction has to represent them under the form of space. Thus space is both mental in origin and objectively real.

§ 5. Idea of time.

(*a*) *Contents of the idea.* Time is conceived by us as the underlying 'continuum' which holds events and indicates their mutual relations. It is looked upon as infinite or unlimited, *i.e.*, without any end. It is impossible to suppose or set any limit to time; for the supposed limit must be *in* time and therefore cannot be the limit *of* time. Again, we conceive time as *duration, interval* and *succession*. Thus, we speak of an event as enduring for a certain length of time, *i.e.*, as occupying a certain portion of time; and we also speak of an interval—*i.e.*—the length of time elapsing between one event and another. We also understand that one event is succeeded or followed by another event in time.

(b) Origin of the idea of time.

(1) *Empirical or a posteriori view.*

According to the upholders of Pure Empiricism, such as Hume, Mill, Bain, the idea of time is nothing more than an abstraction. It is really an abstract idea formed out of our successive experiences through memory and expectation or anticipation. We experience events occurring successively. We remember events that are no longer and anticipate those that are not yet; and we thus get the distinction between *no longer*, *now*, and *not-yet*—between past, present, and future. In short, from our experiences of successive events, we abstract a general notion of succession and thus get the idea of time.

The theory of the evolutionists (Spencer and his followers) is essentially empirical, but it is modified by their doctrine of evolution. The idea of time, according to them, is undoubtedly an abstraction from the experiences of successive events; but it is not the experiences of the individual mind from which the idea is abstracted; the idea has really been derived from the accumulated experience of innumerable generations and has been handed down to us according to the law of heredity. In short, the evolutionists appeal to ancestral experience in explaining the notion of time.

Criticism. The empirical theory is open to the charge that it involves the vicious circle. Our understanding of succession of events presupposes the notion of time. (Cf. The criticism of the empirical theory of space, p. 68). Thus the empiricists assume the idea which they profess to explain.

The same criticism is applicable to Evolutional Empiricism. The inherent difficulty of Empiricism is not removed by an appeal to ancestral experience. (See p. 50).

We have accordingly to fall back on—

(2) *The rational or a priori theory* which has two main forms :

(i) *Phenomenalistic Rationalism.*

(ii) *Realistic Rationalism or Intuitionism.*

(i) The advocates of *Phenomenalistic Rationalism* are of opinion that the notion of time is inherent in the nature of the thinking principle and applied to successive experiences presented to it. In other words, the idea is a *necessary* one, supplied by mind from within. Some go so far as to suppose that it is a purely subjective *form* without anything objective corresponding to it.

(ii) The advocates of *Realistic Intuitionism* maintain that, corresponding to our idea of time, there is a real time outside of us. We discern the real time intuitively.

Popular Dogmatic Realism supposes that our notion of time is an exact copy of the real objective time and that such objective time may exist without any concrete events occurring in it and without any relation to a thinking mind.

Conclusion. We have seen that the empirical theory cannot be accepted, because it assumes the idea of time instead of explaining it. We, therefore, accept the *a priori* theory, and hold that the thinking principle supplies the notion of time from within itself ;* but we cannot go so far as the advocates of extreme phenomenalism. The temporal scheme in which we view events is imposed upon us by, and corresponds to, something in the objective nature of things. As in the case of space, the very fact that the *a priori* form is applicable to the 'matter' shows that there is a correspondence between the inner and the outer.

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* It should be borne in mind that the thinking principle finds in itself the two essential constituents of the idea of time, *viz.*, permanence or duration and change or succession, because it is aware of itself as something permanent in the midst of change—as something which endures and yet undergoes successive changes of state.

Again, time cannot be conceived as existing apart from the concrete events occurring in it. Time implies, as we have seen before, duration, interval and succession, and these are meaningless without reference to concrete events. Finally, the occurrence of events in time implies a permanent unity of consciousness which compares and distinguishes them, and gives them their temporal relations. Now, this consciousness cannot be the consciousness of finite minds, for finite minds themselves have their origin in time. It must, therefore, be a higher unity of intelligence which is not in time, but makes time, which does not itself change, but makes change possible, and which gives reality to the changing phenomena of the universe. In other words, the world of related things and events in space and time implies the existence of an all-embracing Absolute self-consciousness. Thus, like space, time is both mental in origin and objectively real. (See p. 73; also pp. 23, 24, 27, 49, 51; also Philosophy of God).

It should be remembered, that, though experience is not the source of the idea of time, yet it helps the elaboration, explication or development of the idea.

CHAPTER V.

Dialectics as Applied to Knowledge.

(Correlativity in Our Conception of The World).

§ 1. When we analyse our conception of the world, we find that it involves several pairs of complementary ideas, and that one idea of such a pair suggests the other by a dialectic necessity and becomes combined with it in one more complex conception. Thus, an analysis of our knowledge reveals that it involves such contrasted ideas as those of subject and object, phenomena and noumena, conditioned and unconditioned, and the like. A brief account of each of these pairs of correlative ideas or 'dialectic contradictories' is given below.

✓ § **2. Subject, object and the Absolute.** Knowledge always implies a subject and an object, the knower and the known. There can be no knowledge without a subject or a thinking mind that knows and an object that is known. The contrast between subject and object is implied in the very possibility of thought or knowledge. Apart from a subject and an object, knowledge is a mere abstraction.

What, then, is the subject of our knowledge? And what, again, are the objects?

The subject is evidently the thinking mind, self or ego. In every act of knowing or thinking, the self is conscious of itself as the subject that knows or thinks.

The objects of knowledge are really two in number, and they stand in correlation to each other.

(i) In the first place, it is easy to see that the self with its states and activities is itself an object of knowledge to itself. The self is, in fact, a 'subject-object'. It knows its own states and processes, and in and through them it knows itself as a reality having them. When I know, I know that I know—I know that it is *I* who know—I know myself as knowing. Thus the self is at once the subject and the object of knowledge.

(ii) But, again, in being aware of itself, it is aware of a not-self, *i.e.*, of something different from itself affecting and limiting it. In fact, self-consciousness and other-consciousness, internal perception and external perception, the cognition of mind and that of the surrounding world, always go together. The self cannot know itself without knowing an external world standing in opposition to it. I can never say 'I' without raising the idea of the not-self or non-ego.

We may go further and say that all cognition or knowledge has latent in it the notion of the Absolute and Infinite as ultimate substance or reality. The understanding of self and not-self as opposed and external, and yet as mutually related, involves the cognition of a common ground of both which gives them their existence and correspondence. The relation between the self and the not-self which are opposed and exclusive is possible, because they are comprised in a higher unity, *viz.*, the Absolute. It may be noted here that the ideas of self and not-self, subject and object, which are antithetical but correlative, lead *dialectically* to the higher idea of an Absolute synthetic principle or subject-object.*

§ 3. Phenomena and noumena. Epistemology, in discussing the nature, conditions and objects of knowledge, distinguishes between phenomena and noumena. These correlative terms, therefore, require consideration here.

(*a*) *Phenomena*. By the expression 'phenomena' we mean appearances or manifestations. They are really the ways or forms in which things appear or would appear to a thinking mind.

Now, phenomena may be broadly divided into two classes—(1) *material* and (2) *mental*.

The material phenomena are the ways in which matter manifests itself to mind. Now, a material thing manifests itself to a perceiving mind by occasioning changes in it known as sensations. Strictly speaking, therefore, by material phenomena we mean the sensations occasioned in the mind by external material things.

Mental phenomena, again, may be sub-divided into two groups :—(i) subjective and (ii) objective.

The *subjective mental* phenomena are the conscious states and processes—feelings, ideas, volitions—

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* It should be borne in mind that, according to Hegel and his followers, the dialectic process is not a mere logical process—it is a process of the reality itself. The dialectic movement of thought, according to them, is the subjective repetition of the objective movement of reality itself. Hence, according to them, we should regard the subject, the object and the Absolute, not merely as necessary factors of our knowledge, but also as factors of reality—as essential principles in the evolution of objective existence. The Absolute, in evolving the world-system, sets up the antithesis between the subject and the object, and through this difference realises itself as an absolute self-conscious spirit.

Thus, according to Hegel and his followers, the correlativity of subject and object is not merely *logical*, but also *ontological*. There can be no subject without an object and no object without a subject. All things exist in relation to the thought of a thinking mind or subject —all objective existence is relative to or dependent on thought. But this does not imply that the world of things is dependent on *our finite* thought. The truth is that all things exist in relation to the Absolute thought—they are the objects of thought to an Absolute mind or subject.

It is easy to see that, according to this view, the Absolute is the subject-object in the truest sense The finite self of man is also a subject-object in a sense; for, as we have seen before, the self is an object of thought to itself. But it is not *wholly* a subject-object, for it has another object of thought which is opposed and external to it, *viz.*, the not-self. But there is nothing outside the Absolute, so that the only object of Absolute thought is the Absolute Mind itself with its system of ideas which we call the world. Thus, in the Absolute, subject and object are identical.

through which a mind manifests itself to itself or becomes aware of itself.

The *objective mental* phenomena are the changes in the organism and the extra-organic world through the medium of which one mind manifests itself to another, *e.g.*, looks, gestures, speech, writing.

(*b*) *Noumena.* By the expression 'noumena' we mean the realities or things-in-themselves. We have said above that a phenomenon means an appearance. But an appearance is meaningless apart from something that appears or manifests itself. Now, this 'something' underlying and giving rise to the phenomenon is said to be a noumenon. It is so called, because the idea of it is supplied by *nous* or rational thought. The noumena are three in number—soul, matter as it is in itself, and God or the Absolute.

There are certain thinkers known as Sceptics, Agnostics and Phenomenalists who deny the possibility of knowing the noumena or realities. According to them we can know only phenomena or manifestations. (See pp. 44-45, *foot-note*). But a closer consideration of the subject makes it clear that this is an untenable position. The realities or noumena are not veiled or hidden by the phenomena or manifestations. The former are known in and through or along with the latter.

The advocates of Phenomenalism or Agnosticism forget that phenomena themselves are intelligible only by reference to noumena or realities. (See p. 46). Indeed, if we know *only* phenomena, as these thinkers say, how can we have any idea of reality? The very distinction drawn by us between phenomenon or manifestation and noumenon or reality implies that we have some knowledge of reality—that we have some criterion of reality by reference to which we can distinguish between the two. If we knew no other than phenomenal existences, we would never be able to know or characterise them *as phenomenal*.

§4. Relative and Absolute—conditioned and Unconditioned. Our knowledge of the world involves also other correlative ideas such as those of the Absolute and the relative—the Unconditioned and the conditioned. Experience reveals to us a world of conditioned and relative beings. The origin and the continued existence of every object in the world of our experience are found to be dependent on conditions lying outside the object and on the relations in which it stands to other objects. This is what is meant by saying that the things of the world are *conditioned* and *relative*. Their dependence upon, and relations with, other things external to themselves make them conditioned and relative. In fact, things are made to be what they are only by certain conditions and relations. Take the case of a tree. For its origin and continuance in existence it is dependent on the germinating power of the seed, soil, atmosphere, water, heat &c., and these, again, depend on other materials and forces of nature. Take, again, the case of a human being. He derives his being from his parents and ancestors and is entirely dependent upon the social and physical environments for his mental and physical development.

Thus all things of the world are relative and conditioned. But the very conception of the world of relative and conditioned things involves the idea of the Absolute or the Unconditioned as a necessary conception. In fact, the ideas of the relative and the absolute are inseparable correlatives; the one leads by a dialectical necessity to the other. Our knowledge of things as relative and conditioned involves at least a tacit reference to an Absolute and Unconditioned being, *i.e.*, to a being which is above all conditions and relations and makes these conditions and relations—which is independent of all other beings—but upon which all other forms of being depend—which is, in short, self-existent and causes all things without being itself caused (see Philosophy of God, Ch. XIX, § 2 & 3). Things are understood as relative and conditioned only as contrasted with what is Absolute and Unconditioned.

Some thinkers (*e.g.*, Hamilton and his followers) are of opinion that the Absolute or the Unconditioned is inconceivable and unknowable. They hold that "to think is to condition"—*i.e.*—to supply in idea the *causes* or *conditions* which have produced the object of thought *in time* and other objects which limit it *in space*. In other words, in thinking or knowing a thing, we have to understand its conditions and limitations. But the Absolute or the Unconditioned is above all conditions. Therefore the Absolute cannot be thought or known at all. "To think the Unconditioned" would mean "to condition the Unconditioned" or "to think the Unthinkable" which would be a contradiction. In fact, in order to understand a thing we have to compare it with other things on the same level with it and external to it. But there is nothing on the same level with the Absolute, and there is nothing outside of it with which it may be contrasted and from which it may be distinguished. The Absolute is, therefore, unknown and unknowable.

But this is based on a misunderstanding. It is true that there cannot be anything outside the Absolute with which it may be contrasted; for, if there were anything outside the Absolute, the Absolute would be limited or conditioned by that other thing and so would not be absolute. But it is not true that the Absolute is inconceivable and unknowable. We have a revelation of the Absolute in the finite, relative or conditioned beings evolved and sustained by it. In other words, it is in and through the world of conditioned and relative things that we understand the nature of the Absolute; for these things constitute its manifestation. In fact, the logical condition of

understanding the conditioned and relative things as such is the conception of the Absolute; so that we cannot think even the conditioned and relative things without raising the idea of the Absolute or Unconditioned Being. The Absolute and the relative together form one concrete reality or organic whole, so that each can be understood in and through the other. (See Philosophy of God).

Spencer takes up a peculiar position. He admits that, in thinking the world of conditioned and relative things, we are constrained to postulate and believe in the existence of one Absolute and Unconditioned being. But he says that we cannot know anything about the nature of that being. We know that it *is*, but we do not know *what* it is. All beings are the manifestations of a single reality which is unknown and unknowable. As he himself says in one place, "The power of which the universe is the manifestation is utterly inscrutable."

But this is an untenable position. The existence of a thing can be known only through and along with certain attributes revealed to us. If, therefore, the existence of the Absolute is known to us, as Spencer says, surely some of the attributes of that being must be known to us in the same act of cognition. As Dr. Martineau says, "To know that an object *is*, and yet to know nothing that it *has*, is impossible, because contradictory." (*Study of Religion*, Vol. I, p. 124). Spencer himself admits that the universe is the 'manifestation' of the Absolute. If so, how can the Absolute be utterly unknowable? Does not the word 'manifestation' mean 'revelation, expression, or that which makes known'? There is evidently an element of contradiction in Spencer's statement.

We conclude, then, that the Absolute Being is not wholly unknown and unknowable. It is revealed to us in and through the world of conditioned and relative beings which constitutes its manifestation.

✓ **§ 5. Finite and Infinite.** We have next to consider the last pair of correlative ideas—*viz.*, the ideas of *finite* and *infinite*.

(*a*) The term *finite* means that which has a limit or end. A finite being means, therefore, a limited being—a being that is limited in extent, duration and productivity. A finite being is limited in space and time. It occupies a certain definite portion of space; it comes into existence at a certain point of time and continues for a certain length of time. Further, it is restricted in activity or power. Its power of producing effects or changes is limited—it has a certain definite range of activity. Experience gives us a world of finite, relative and conditioned beings.

(*b*) The term *infinite* means what is *unlimited, endless, inexhaustible*. By the expression 'Infinite Being' we mean the being that is not limited by space and time and is not restricted in activity. The Infinite being is conceived as transcending the limitations imposed by space and time. It is *not in* space and time; on the contrary, space and time are *in it*. Further, its productivity is unlimited or endless. There is nothing either within it or without it to limit its power of producing effects. It is the inexhaustible energy from which all things proceed and by which they are sustained. The thought of finite things forces upon us dialectically the idea of the Infinite power above space and time as their ground and support.

The above is the rationalistic and idealistic account of the idea of the Infinite. But according to the empiricists the idea of the Infinite can only be a *negative* idea. It is not the positive idea of any real concrete being which can be understood by the human mind as what it really is. Experience is the only source of knowledge, and accordingly the contents of all our ideas must be derived from experience. But experience does not give us anything that is really infinite. Hence the idea of infinite is only a negative idea—an idea without any positive content. It simply means 'not finite' and nothing more. It simply implies absence or negation of limits. Thus it is essentially an 'empty' idea.

How, then, do we get this negative idea from experience? It is chiefly through our thought of space and time. However much we may seek in space and time, we can never find or conceive anything beyond which there is no more space or time. We go on thinking limits beyond limits—space beyond space, time beyond time. Experience never gives any space or time so wide that there is not more beyond it. Thus our inability to find or conceive any limit to space and time gives rise to the negative idea which we call the idea of the infinite. But it simply implies negation of limits—a mere idea of *beyond and beyond*. (See Note II).

But this empirical account of the idea of infinite is superficial. Reflection shows that it is a positive idea—an idea of a being above space and time and having inexhaustible productivity which evolves and sustains all things. In knowing the world of finite, conditioned and relative beings we know one Absolute and Infinite power as their ground and support. The ideas of finite and infinite together form one concrete and complete idea. Each idea leads by a dialectical necessity to the other. This is the rationalistic view.

Spencer, though he is an empiricist, admits that the idea of the Infinite is a positive idea. He admits that, in knowing the world of finite and relative things, we know the existence of an Absolute and Infinite energy whence they all proceed. But he adds that the nature of this being is unknown and unknowable. His statement involves a self-contradiction as pointed out before. (*Vide* § 4).

NOTE I.

RELATIVITY OF KNOWLEDGE.

Our discussion of the epistemological problems of the nature, conditions and limits of knowledge cannot be complete without a reference to the doctrine of relativity of knowledge. A brief account of this doctrine and its bearing on the validity of knowledge is given below.*

Now, Psychology and Epistemology agree in admitting that our knowledge is relative. What, then, is meant by this?

In the first place, knowledge is relative in the sense that it presupposes a relation between the knowing subject or mind and the object of knowledge. The objects are known only in relation to, and as distinguished from, the knowing subject.

Secondly, knowledge is relative in the sense that it involves a cognition of the relations existing among the objects themselves. We know one thing as distinguished from, and in relation to, other things. In other words, we know an object by contrasting it with other objects and finding out its relations to them.

Now, if we combine the above two principles, we get the following:

Objects are known in relation to each other and in relation to the knowing mind.† This is the doctrine of relativity in its most comprehensive form.

But the doctrine of relativity of knowledge has been carried too far by many thinkers, ancient and modern. The sceptics and agnostics, from Protagoras down to Bain and Spencer, have employed it to support their theory that there can be no real knowledge. They argue that, because objects are known in relation to each other and in relation to the thinking mind,

therefore they cannot be known in their true character. The subject, self or mind cannot know the real object, but only the relations of the object to itself and to other objects. The self can have no real knowledge even of itself, because it can know itself only in relation to, and in interaction with, the not-self or other beings. Protagoras, an ancient Greek philosopher, and his followers known as sophists argue in the following way:—A mind can know things only in relation to itself—only as they appear to it—only as they affect it through the senses; things, therefore, are never known in their true nature; and since men differ in their mental and physical constitutions, there can be no universal or common standard of knowledge, beauty or goodness. "The individual man is the measure of all things." There are as many minds as there are men; and there are as many standards as there are minds. There can be no real and universal knowledge.

In modern times Hamilton, Spencer and Bain have made so much use of the doctrine of relativity that they have been called "relativists." According to Hamilton and his followers (*e.g.*, Mansel), the Law of Relativity implies that a thing can only be known as distinguished from external things limiting and conditioning it, and in relation to the thinking mind. Hence all we can think or know are *phenomenal, finite, relative, conditioned* existences; the Infinite and the Absolute or the Unconditioned is inconceivable and, by consequence, unknowable. (See pp. 82-83).

The doctrine of the relativity of human knowledge as explained by Hamilton and his followers is substantially accepted by Spencer, though he differs with them in an important point. According to him, the realm of existence is divided into two regions, the *knowable* and the *unknowable*. Finite, conditioned, phenomenal existences are knowable; beyond these there is one unknowable Absolute, concerning which we can simply say that it *is*. He finds that at least a tacit reference to an Infinite and Absolute being is required by the Principle of Relativity itself. He concludes that it is impossible to understand the world of finite and relative things as such except in relation to, and by contrast with, an Absolute power that lies beyond and of which the world is the manifestation; and that "we have a positive, though vague, consciousness of this ultimate being."*

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* For a full account of this doctrine, see some text-book of Psychology. See also Mill's *Examination of Hamilton's Philosophy*, Ch. II; Martineau's *Study of Religion*, Vol. I, Ch. IV; Caird's *Philosophy of Religion*, Ch. I.

† This is sometimes expressed by the equation 'to know = to distinguish, to relate'. It follows from this that self and not-self are known in relation to, and as distinguished from, each other. (See p. 78).

Dr. Bain again asserts, "We do not know any one thing by itself, but only the difference between two." According to him, the entire world (as known to us) is known only as a system of relations. "When we ask," says he, "Relations between what?" we get always the same answer indefinitely, 'Relations between relations. All is relation' ". Thus we get, to use the words of Prof. Marvin, "a great cobweb of relations."

Criticism. (i) The exaggeration of the principle of relativity is based on a misconception of facts. In order that anything may be known at all, it must come into some relationship with the knowing subject or mind. This is the very condition of the possibility of knowledge. Knowledge, to be knowledge, must be knowledge of *an object* possessed *by a subject*. The fact that we can know a thing only in relation to our minds does not invalidate such knowledge. As Dr. Martineau says—"As this is what constitutes knowledge and not what contradicts it, it gives no ground for distrust. . . . It does not follow that we know no entities, because we know them only in relation to us" (*Study of Religion*, Vol. I, p. 116). The absurdity of the sceptical position has been explained very clearly in Schwegler's History of Philosophy in the following passage: "Does it not seem absurd to say that by interposition of mind by which alone knowledge is possible, knowledge is at the same time impossible? What alone renders something possible, alone renders it impossible! I know, but because I know, I do not know! I see, but, because I see, I do not see! Is it a fact, then, that, because both subject and object are present in cognition, the one must be destroyed by the other?" (*History of Philosophy*, pp. 391, 392). We see, then, that the mere fact that we can know objects in relation to ourselves or in so far as they affect our consciousness is no reason for distrusting our knowledge. We know not merely the relations of the objects to ourselves, but also the objects themselves; we know not merely the affective states or modifications of our consciousness, but also the realities revealed and implied in them.

(ii) It is true that the self can have no consciousness of itself out of relation to and interaction with the not-self or other things. But this is no ground for denying the validity of self-knowledge. The self cannot be known otherwise than in relation to and in interaction with the not-self, simply because, as a finite being, it does not really exist otherwise. In other words, as a finite being, it really lives in relation to, and by action and reaction with, other beings, and so it cannot be known out of relation to them.

(iii) Protagoras says that men differ in their physical and mental constitutions, and that, therefore, there can be no common or universal standard. But he really exaggerates the physiological and mental differences existing between individuals. Different individuals, though different, agree with one another in having a common essential nature. As Prof. Weber says, "He (Protagoras) fails to see that the human reason is essentially the same in all individuals. *Men* hinder him from seeing *man*." (*History of Philosophy*).

(iv) Hamilton and his followers appeal to the principle of relativity to prove that the Absolute is inconceivable and unknowable. But a little reflection shows that a notion of the Absolute is required by the principle of relativity itself—that our conception of the relative as such implies a conception of the Absolute; and this is admitted by Spencer, the most distinguished of all relativists. But Spencer makes a mistake when he supposes that nothing can be known about the Absolute beyond the mere fact of its existence. (See p. 83). Since the Absolute produces the finite things and minds and manifests itself through them, it is knowable in and through them. It is true that the Absolute can be known relatively or in relation to our minds. But then the like thing is true of every other object of knowledge whatever; and it is inherently impossible that it should be otherwise. It is true that the nature of the Absolute cannot be *comprehended* or *fully* grasped by our finite intellect; but still we can have a *partial* knowledge of it; we can *apprehend* some of its qualities. (See Philosophy of God).

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* "Every one of the arguments," says Spencer, "by which the relativity of our knowledge is demonstrated distinctly postulates the positive existence of something beyond the relative. To say that we cannot know the Absolute is, by implication, to affirm that there *is* the Absolute." He again asserts, "The positive existence of the Absolute is a necessary datum of consciousness, and, so long as consciousness continues, we cannot for an instant rid it of this datum." In another passage he says, "The belief in the omnipresence of something which transcends our intelligence has nothing to fear from the most inexorable logic. Here there is a truth of the utmost possible certainty."

(v) Dr. Bain says that we are aware simply of relations. But is it possible to know relations without knowing the terms of the relations? Relations without objects related are meaningless. As Dr. Marvin says, "Knowledge is not merely a great cobweb of relations. Knowledge is of course a system of relations admitting of indefinite extension; but the objects among which the relations hold are always facts—facts revealed then and there." (*Philosophy*, p. 385).

We conclude, then, that we know objects, though we know them in and through their relations with other objects and ourselves. It is true that our knowledge is not exhaustive, for we can know objects only in so far as they affect our consciousness. But our knowledge is valid so far as it goes. What we know, we truly know, though we do not know all. Thus we see that the relativity of knowledge does not affect its validity.

NOTE II.

DIFFERENT THEORIES OF THE INFINITE.

A general account of the ideas of finite and infinite has been given in pp. 84-85. It has been pointed out there that empiricists and rationalists hold two opposite opinions regarding the idea of infinite. According to empiricists in general, it is a *negative* idea, for experience does not give us any really infinite being. Experience gives us positive knowledge of the finite, and to this is added the negative idea of infinite when we find that there is no limit to space and time (neither to their greatness nor to their smallness) and to the multiplication and subdivision of things. According to rationalists and idealists, it is a truly positive idea, which is supplied by *nous* or reason to fill up, supplement or complete the idea of the finite. These thinkers assert that the two ideas of finite and infinite are correlative factors of one and the same concrete and complex idea. It is true, as the empiricists say, that we directly perceive only finite and relative things, and find no limit to their multiplication and subdivision, or to the space and time in which they exist. But, for this very reason, there necessarily arises in our minds the thought of an inexhaustible productive power transcending the limitations of space and time as the ground and support of all beings.

We may here briefly indicate the views of several distinguished thinkers of different schools.

(i) *Locke*. Locke is an empiricist, and his view has been indicated above. According to him, the idea is negative. Experience gives us a perception of extended things in space without giving any definite limit or termination to space or things in space, so that we can go on thinking of more and more space or things in space, as long as we like, without ever coming to any necessary boundary, because experience gives us no such boundary. Hence we get the idea of want of limit or boundary, and this is the idea of infinite.

(ii) *Hamilton and Mansel*. Though not empiricists, they take the ideas of infinite and absolute to be negative. According to them, infinite and absolute are mere terms indicating the negation or absence of the conditions under which thought is possible.

(iii) *Max Muller*. He seems to hold that the infinite simply means the negative of the finite—that which goes *beyond* the finite—that which the finite is not.

(iv) *Spencer*. Though an empiricist, he agrees with the rationalists in holding that the idea of the infinite and the absolute is a positive one—that it is the positive basis of all our consciousness of the finite, relative or conditioned. Though unknowable in itself, the Infinite and the Absolute is presupposed in all we know. We have a positive, though vague, consciousness of its existence.

(v) *Hegel.* According to him, the idea is a positive one. The Absolute and the Infinite is not merely the negative or opposite of the finite and the relative. It is not an indeterminate background of the relative and the finite—not an unknowable something beyond them. It is that which includes and explains them. It is that which realises and reveals itself in and through them and is therefore knowable, though not exhaustively. The Absolute and the relative, the Infinite and the finite, form one organic whole, so that the one can be understood in and through the other.

NOTE III.

RELIGIOUS AGNOSTICISM OR SEMI-AGNOSTICISM OF HAMILTON AND HIS FOLLOWERS.

It has been pointed out in p. 82 and also in p. 87 of this book that, according to Hamilton, Mansel and other thinkers of their school, God who is an Infinite and Absolute being is unthinkable and unknowable. Our reason or intellect can give us knowledge only of finite, conditioned, relative things. "A God understood would be no God at all."

It is not to be supposed from this that these thinkers mean to destroy religion altogether. They hold that *revelation, and not reason*, is the basis of religion. God who is a personal being *reveals* or *communicates* His existence and attributes to man through the medium of inspired individuals (seers and prophets), and thus makes religion possible. It is true that God cannot be conceived, known or understood by our reason or intellect ; but still He is an object of *faith* or *belief* ; and this faith or belief which implies true conviction is generated in us by revelation. In the words of Sir W. Hamilton himself, "By a wonderful revelation we are, in the very consciousness of our inability to conceive aught above the finite and relative, inspired with a belief in the existence of something unconditioned beyond the sphere of all comprehensible reality." (*Discussions* : *Philosophy of the Unconditioned*, p. 15).

Criticism. A criticism of the agnostic theory of knowledge has been given before. We have here simply to consider the appeal to revelation made by these thinkers. Now, it is easy to see that even revelation cannot give us any knowledge of what is by its nature unthinkable. As Dr. Caird remarks, "If thought is, by its very nature, imprisoned in the relative, supernatural aid can no more communicate to it a knowledge of the Absolute than it can convey ideas of colour to a man born blind." (*Philosophy of Religion*, pp. 17-18). In fact, if religious truths cannot at all be understood by human intellect or reason (as this theory assumes), then, "even when communicated, they would have no real meaning to the mind—they would not really be revelation, but only meaningless words, or at most only vague symbolism and metaphor, not real knowledge." A revelation, to be really so, must be to and through reason ; otherwise it will be quite unintelligible like dictation in an unknown foreign tongue —it will be to us no better than the meaningless sentence "Humpty dumpty is an abra cadabra."

CHAPTER VI.

TRANSITION TO PHILOSOPHY PROPER :

IDEAS OF THE WORLD, SOUL, AND GOD.

We have now finished our discussion regarding the nature, conditions and limits of our knowledge. We have found that such a discussion is necessary at the very outset of philosophical study. We now proceed to study philosophy proper which seeks an explanation of the universe as a whole. Since philosophy aims at an explanation of the world-system as a whole, it has three branches—

(1) Philosophy of Nature or the physical world.
(2) Philosophy of Mind or Soul.
(3) Philosophy of God or the Absolute.

(1) Philosophy of Nature avails itself of the results of physical sciences, supplements them by Rational Cosmology, and thus seeks to determine the real nature and origin of the external material world. The world is known to us as a system of finite realities—as a system of things co-existing with one another in space, and of events succeeding one another in time; and Philosophy of the world has to answer such questions as the following :—Is this world a mechanical aggregate of self-existent units, without any essential bond of connection or unity amongst them? Or is it the product of one Absolute and Infinite power? Is the history of the world a process of evolution—a progress from a lower to a higher state—from a less perfect condition to a more perfect one? If so, what is the nature of that evolution? Is the evolution of the world wholly mechanical? Or, is it wholly teleological, *i.e.*, guided by a thought, purpose or idea working behind it? What is the true nature of matter? These are some of the questions which Philosophy of Nature has to answer.

(2) Philosophy of Mind, again, avails itself of the results of Empirical Psychology and follows it up with Rational Psychology discussing the real nature of mind or soul. It is said that human beings have souls, and that rational thinking is the attribute of a soul. Now, Philosophy of Mind has to answer such questions as the following :—What is the true nature of soul? What is the precise relation of organic life and soul, or how is soul related to the body? Has there been mental evolution in the animal kingdom as a whole? (This involves the question whether the rational mind of man has been evolved by a slow and continuous process of development out of the animal mind). What is the basis of moral consciousness which man possesses? What is the true relation in which individual minds stand to society? These are some of the questions which Philosophy of Mind seeks to answer.

(3) Finally, Philosophy of God or the Absolute avails itself of the results of the above two branches of Philosophy and seeks to discover the nature of the Supreme Cause called God. We say that there is one Infinite and Absolute personal God who is the first cause, guide and support of all things and minds. Philosophy of the Absolute has to examine this belief among others. What is the nature of God? What is the precise relation in which He stands to the world of things and minds? Is He wholly transcendent? Or, is He immanent in a certain sense? These are a few out of the many questions which Philosophy of the Absolute aims at answering.

PART .

PHILOSOPHY OF NATURE OR THE WORLD.

CHAPTER VII.

THE WORLD AS A SYSTEM OF REALS.

§ 1. Reality or substance and attribute.

Before we attempt to understand the sense in which the world is a system of reals, it is necessary for us to have a clear conception of what is meant by reality.

Now, the realities are known to us as various in kind and degree. Thus we speak of one absolute, unconditioned, infinite and self-existent reality which evolves and supports all other forms of realities.* We speak, again, of relative, conditioned, dependent, derivative, finite realities. These, again, are of three forms—inanimate or non-living, animate or living, and mental. The mental beings are either rational or non-rational.

In the present chapter we are concerned with finite realities.

What, then, is meant by a reality? How is it to be defined? What is its essence?

Now, by a reality is meant *something which is permanent in the midst of changing states and which preserves and realises itself by successive activities.* The essence or the fundamental attribute of a reality is its power of self-preservation and self-realisation, and its different attributes are so many applications, expressions or manifestations of this fundamental

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* Monism assumes one self-existent reality from which all finite realities are derived. Dualism assumes two, and Pluralism, a large number of self-existent realities. The question which of these theories is the right one will be fully discussed in Philosophy of the Absolute.

attribute. In the case of a finite being (*i.e.*, a being which is limited or acted on by other beings), it is found that its reality consists in its power of preserving, asserting and developing its own existence in interaction with other finite beings; and that the changes, states or modes of such a being arise from its continual reactions or efforts of self-preservation against the actions of other beings.* It should be borne in mind that a concrete reality has two correlative aspects: (1) the aspect of substantiality, permanence or identity, and (2) the aspect of having attributes or qualities and changes. In other words, a concrete reality is an abiding substance having attributes and undergoing changes. Substances apart from attributes or attributes apart from substances are mere abstractions. (See Ch. IV, § 2).

§ 2. The sense in which the world is a system of reals.

By a system is meant a unity in plurality—a plurality of parts, elements or factors related to each other in such a way as to form one organic whole. Now, the results of the empirical sciences tend to support the view that the world is a system in this sense—that it is a unity in plurality. As Prof. Jevons observes, "Certain deep similarities have been detected among the objects around us and have never yet been found wanting. As the means of examining distant parts of the universe have been acquired, those similarities have been traced there as here. . . The same natural laws can be detected in operation in every part of the universe within the scope of our instruments; and doubtless these laws are obeyed irrespective of distance, time and circumstance." (*Principles of Science*, p. 3). In fact, modern physical sciences show that all the various constituent bodies of the physical cosmos are composed essentially of the same substances ; that these bodies are governed by the same laws of gravitation, electricity, and the like; and that they act and react in moving equilibrium. The doctrine of conservation of energy as propounded by modern science has established that one form of energy may be transformed into another, thus indicating a correspondence between the different laws of nature. Thus there is unity in the physical cosmos. Modern Biology, again, shows that all the various forms of living beings that inhabit the earth are of the same essence and origin and are subject to the same conditions and laws. Finally, modern Psychology shows that consciousness is everywhere subject to the same conditions and laws, and that the minds of animals and men are closely connected with their physical organisms, and, through these, with the extra-organic world. Thus we find unity and connection everywhere. As Dr. Paulsen observes, "Reality represents, so far as we can see, a unitary, organized system governed throughout by laws: a *cosmos.*" (*Introduction to Philosophy*, p. 149).*

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* In the Absolute reality, there can be no effort of self-preservation against other beings acting on it, for there is nothing outside of it. Its essential attribute consists in the activity of self-realisation, *i.e.*, realisation of itself as a concrete self-conscious power through a world of finite things and minds evolved by itself from within. Its states consist wholly in activities of self-realisation and self-expression.

But if, as modern science tends to show, the world is really a system, *i.e.*, a unity in plurality, how can this fact be accounted for? What is the explanation of the cosmical nature of existence, the organisation and concentration of all things into one great correlated system? The theory of the world known as Pluralism fails to explain this fact. That theory supposes that the world has been produced through the fortuitous combination of a number of self-existent and originally unconnected units or realities. But the great difficulty of Pluralism is to

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* For a very good account of the unity of the world, see pp. 145—149 of Dr. Paulsen's *Introduction to Philosophy*.

explain the organic unity, harmony and order of the world-system. If, as the theory says, the ultimate units or realities w originally unconnected and independent of one ano how could they come together so as to influence one another and build themselves up into the orderly system such as we find the world to be? The world as an organised system can be understood only on the supposition that there is a single universal power which evolves the things constituting the world and gives them their order and connection. The world can be *'one in many'* only on the condition that the 'many', in some way, derive their existences and relations from 'one' principle. Thus Monism is justified. (See Ch. X, Mechanical and Teleological Evolution ; also Philosophy of God).

CHAPTER VIII.

THE WORLD OF MECHANISM.

(PROBLEMS OF MATTER).

§ 1. Spatial and temporal orders of Reals.

Experience reveals to us that the things and events which constitute the physical world have spatial and temporal orders, *i.e.,* certain orders in *space* and *time*. We know that material things have the attribute of impenetrability. By virtue of this attribute they resist one another and remain external to one another; and being external to one another, they occupy different relative positions. This fact is expressed by saying that material reals have spatial orders. What we call mechanical interactions presuppose the existence of the spatial orders of things.

Again, things of the world are incessantly undergoing changes; and these changes succeed one another in time. Thus they have certain temporal orders or orders in time. It must be borne in mind that the succession of events in time is more fundamental, for the order of things in space depends upon the succession of events in time.

Two philosophical questions arise in this connection: What are the essential natures of space and time? And what is the relation of the Absolute reality to space and time? The first question has been fully discussed in Epistemology (see Ch. IV, § 4 & 5); and the second will be discussed in Philosophy of the Absolute.

§ 2. Matter, motion and energy.

In the world of our experience we find matter, life and mind. In the present section we are concerned with material things. Our main question here is:— What is matter? In what does the essence of matter

consist? What are the fundamental or essential attributes of matter?

(a) *Attributes of matter.*

In modern times it has become customary to divide the attributes of matter into two groups—*primary* and *secondary*. (See Ch. II, § 2). The primary qualities are regarded as essential to the very existence of material things as such. These are *extension* or the attribute of filling space, *impenetrability* or the attribute of resisting penetration or motion through it, and *mobility*. or the capacity of motion (molar and molecular) in various modes. The secondary qualities are colour, sound, taste, smell and temperature. These are supposed to be due to different modes and forms of the primary qualities, *i.e.,* to different relative positions, arrangements and motions of the composite molecules and atoms, waves of atmosphere and ether, chemical disintegrations &c., which affect the sense-organs. Take, for instance, the secondary quality of heat. Subjectively, it is a form of sensation; objectively, it implies that the particles or the composite molecules of the material body are in agitation, vibration or motion. Sound, again, objectively implies that a material body, by its motion, sets the atmosphere vibrating, whether in successive shocks, as in the case of noises, or with continuous undulation, as in the case of musical sound—so that its vibrations are communicated to the drum of the ear. Light implies that a material thing, by an extremely rapid vibration of its particles, gives rise to the vibrations and waves of ether which affect the retina of the eyes, while darkness implies the absence of such vibrations. Colour, again, arises from the property which a material thing has of reflecting or sending back into the eyes the ethereal wave that falls upon it, and this property, again, is due to the peculiar arrangement of the atoms that constitute it. Bodies which, on account of their peculiar internal structure, reflect the compound ethereal waves fully, call forth the sensation of whiteness, while those which do not at all reflect, but absorb them, excite the sensation of blackness. Other colours arise from the property which things possess of decomposing the compound ethereal waves, absorbing portions thereof, and reflecting the remaining portions into the eyes. Taste, again, implies that a chemical process takes place when a liquid or a soluble substance is taken into the mouth, and that this affects the nerves of the tongue. Small arises on account of the effluvia or minute particles of a material body affecting the olfactory nerves of the nose.

Thus all these properties of matter arise from its occupation of space and the different positions, arrangements and movements of its constituent particles in space.

(b) *Different hypotheses as to the nature and constitution of matter.*

(i) *The Atomic Theory.** In explaining the qualities of matter we could not avoid speaking of molecules and atoms. Hence, something must be said in this connection about the Atomic Theory.

This theory consists in supposing that matter is composed of ultimate units or particles which may be

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* In the West, the Atomic Theory was first started by the Greek philosopher *Democritus* (B.C. 420). In the East, it was first explicitly propounded by the Indian sage *Kanada*, the founder of the *Vaisheshika* system of Philosophy. In modern times (A.D. 1808), the theory was revived by *Dalton* to account for the phenomena of composition and decomposition, combination and disintegration, and until lately it was generally accepted by the scientific world. Recently, many scientists have asserted the insufficiency of the theory. According to them, the atoms, instead of being the simplest constituents of matter, are extremely complex systems of revolving units (called by them *electrons* or *ions*). What, then, are these *electrons* or *ions*? It is suggested by some that these may be ultimate centres of force only. See Note, pp. 108-109.

called atoms. It assumes that, if we go on dividing and subdividing a material thing, we shall arrive at last at the minutest portions of the thing known as *molecules*, and that, if we carry our analysis further (by means of some chemical process), we shall get *atoms* of the different elements of which the thing is composed. According to this theory, we cannot proceed further than atoms which are the ultimate constituents of matter. (It should be observed that a molecule of a compound thing is formed by the atoms of the elements that compose the thing, *e.g.*, two atoms of hydrogen and one atom of oxygen unite to form a molecule of water). Modern Chemistry holds *92 that there are ~~70~~ elements, and that, through the combination and recombination of the atoms of the elements according to the laws of motion (attraction and repulsion), the different material things of the world are built up.

What, then, is the real nature of these atoms? In former times they were generally looked upon as bits or particles of inert, passive and impenetrable substance. But this theory failed to explain the activity and motion found in matter. Hence modern science favours what has been called—

(ii) *The Dynamical Theory* of matter.* According to this theory, the essence of matter is energy or active power, and the so-called atoms are centres of energy or rather systems of energies or forces in equilibrium. The properties of matter are nothing but modes of energy. A piece of matter, as known to us, is only a cluster of energies affecting us and imposing on us the sensations of resistance, weight, motion, colour and the like. Energy, therefore, is not anything put into matter from without, as is sometimes imagined ; on the contrary, it constitutes the very essence of matter. Matter is nothing but energy manifesting itself in particular ways ; and the energy which is the essence of the material world manifests itself fundamentally in two ways: (1) as impenetrability or resistance to motion, and (2) as motion and tendency to motion. In other words, it appears in the fixed form and also in the motor form. A portion of the energy of the material world must be conceived as existing in the fixed atomic form or in a state of fixed equilibrium, constituting the elements of matter called atoms which are relatively permanent and fitted to resist motion through space. But a part of the material energy is manifested in the motor form—as motions of gravitation, elasticity, chemical attraction and repulsion, motions exhibited in heat, light and electricity.

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* See Note at the end of this chapter.

statical energy and kinetic energy

The question of the origin of motion will be discussed below (*Vide* § 5).

§ 3. Conservation of energy.

Modern science supposes that there is no destruction of physical energy—there is simply transformation. When one form of energy disappears, it is not absolutely lost. It reappears in another form in an exact equivalent. The various forms of physical energy—mechanical, chemical, thermal, magnetic, electric—form a closed circle, so to speak, in which one is transformed into another without any loss in quantity.

The principle of conservation in the form in which it has been stated above has been demonstrated (approximately at least) by modern science. The expression 'conservation' is sometimes used in a wider sense to signify that the total amount of energy in the universe as a whole remains constant and unchanged. In other words, it is used to mean that the amount of material energy concentrated into the form of atoms, *i.e.*, the quantity of matter in the world as a whole, as well as the total amount of energy expressed in the form

of atomic motion, remains unchanged. But there is no certainty about this.

§ 4. Correlation.

A deeper reflection on the constitution and history of the material universe has led some to use the expression "correlation of forces" in place of "conservation." All that has been established by science is that the various physical energies are transformable into one another and that there is a constant or uniform relation among them, and therefore a diminution of activity in one way is followed by a corresponding increase in another. But this suggests that there is one universal and absolute energy immanent in the world and that all the various forms of energy found in the world are its expressions or manifestations.

Thus we find that Philosophy of Nature tends to become monistic and idealistic. (See Philosophy of the Absolute).

§ 5. Causal series.

The material world presented to our experience is a world of unceasing change. The various material things which make up physical nature are undergoing incessant changes or transformations. But changes are not isolated; every change is caused by some antecedent change or combination of changes and gives rise to subsequent ones. This fact is expressed by saying that Nature as presented to us is a series of events in time and that the succession of events is due to the operation of causal energy.

We are thus led to the ideas of *cause* and *effect*. The questions of the origin and contents of the idea of causality have been fully discussed in Epistemology. (See Ch. IV, Categories of Knowledge). We are here concerned with the following metaphysical question: What is the origin of the causal energy or force found in the material world? Whence does it arise?

Now, as pointed out before, force in Nature is manifested in the form of motion (molar and molecular).

Hence the question is really equivalent to the following: What is the origin of motion and its laws?

Different theories are possible:

(i) Materialism assumes the self-existence of material atoms with their motor force. It assumes that atoms and the different modes of motion have been in existence from all eternity.

(ii) Deism assumes that God Almighty created the material atoms at a certain point of time, gave them their forces and laws, and thus created the vast machine which we call the world; and ever since the time of creation, the world has been going on by itself independently and outside of God, just as a machine once constructed and set going by a human artificer goes on by itself without any further interference.

(iii) Ideal-realism assumes that all changes or motions in the material universe have their origin in one immanent self-realising idea or thought. Causality in nature is the putting forth of energy by one Absolute mental power for the realisation of an end. The evolution of the entire physical world is guided by an idea and purpose present and operative in it.

The question now is: Which of them is the right theory?*

Materialism is unsatisfactory. It assumes everything and explains nothing. It fails to explain the presence of law and order in the world-system and the origin of life and mind.

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* For a complete and critical account of these theories, see Ch. XXI, Philosophy of God or the Absolute.

Deism, though much better than crude Materialism, is too anthropomorphic. It supposes that the relation of God to the world is the same as the relation of the human artificer is to his production.

Ideal-realism or Panentheism explains what other theories fail to explain. It can adequately account for the causality, order, laws and harmony found in Nature. The extremely complex adaptations of means to definite results that we find everywhere in Nature, organic and inorganic, and the origin of life and mind can be explained only on this hypothesis. It is consistent with the principle of Conservation of Energy and the most recent theory of matter. (See Note at the end). In fact, on the whole, it is the most satisfactory theory of the world and is thus preferred by Rational Philosophy.

NOTE.

NATURE AND CONSTITUTION OF MATTER.

A general account of the principal hypotheses as to the nature and constitution of matter has been given in § 2 of this chapter. It has been pointed out there that modern science favours what is called the dynamical theory of matter and explains the atoms in dynamical terms, *viz.*, as centres of force or energy or rather as systems of energies or forces in equilibrium. A brief account of the several dynamical theories of atoms is given below.

(i) The view of *Boscovitch* and *Faraday*. According to these distinguished scientists, the ultimate constituents of matter called *atoms* are not indivisible, inert, unalterable particles, but are mere *centres of force*. They are really centres or unextended mathematical points from which attractive and repellent forces operate according to fixed laws. Thus matter is reduced to a number of forces acting from a number of points. These scientists finally conclude that the atoms are the centres or points from which *one universal energy* which is the essence of the world operates.

(ii) The view of *Sir William Thomson (Lord Kelvin)* and *Helmholtz.* According to them, the atoms are probably small vortex-rings or rotating portions of the ether which is a 'perfect fluid' filling all space. By a 'perfect fluid' they mean a frictionless unresisting fluid without any inertia. It is assumed by them that the whole of space is filled by a fluid or liquid which must flow through eternity without stopping, because, being perfect, it involves no friction. It is further assumed that in this fluid there are innumerable eddies, whirlpools, or vortex-rings which, being in an all but perfect fluid, are virtually everlasting and answer the purpose of what have been called atoms ; for rotation once commenced in a perfect or frictionless fluid will continue for ever.

(iii) More recently, it has been supposed that the atoms are extremely complex systems or reservoirs of equilibrated forces. This is the view of *Ostwald* and many others.

Indeed, it is generally held now-a-days that the atoms, instead of being the ultimate inert constituents of matter, are themselves made up of simpler units (*electrons* or *ions*). Each atom is a system of units which revolve about one another and about a common centre with inconceivable rapidity. Hence an atom is sometimes described as a little world in itself—as a solar system in miniature. "Chemical atoms," says a distinguished writer, "are very complicated structures : an atom of pure iron is probably a vastly more complicated system than that of the planets and their satellites : each constituent of a chemical atom must go through an orbit in the millionth part of the twinkling of an eye, in which it is successively or simultaneously under the influence of many other constituents or possibly comes into collision with them."

What, then, are these 'ions' or 'electrons' themselves, of which the atoms are said to be composed? We have seen above that, according to Faraday, the atoms are ultimate centres of energy, and, according to Lord Kelvin, they are vortex-rings in the ether which is a perfect fluid. These theories of atoms are not favoured now-a-days, but still it is possible that the units or ions which constitute the atoms are themselves ultimate centres of energy or perhaps vortex-rings in the ether.

Thus energy is the essence of matter ; and this energy expresses itself in two ways :—(*i*) as *intra-atomic* energy, *i.e.*, energy *within* the atom as manifested in the extremely rapid revolutionary movements of the constituent electrons or ions, and (ii) as *extra-atomic* energy manifested in the force of outward motion and impact.

It is easy to see that all the above theories of matter are consistent with and tend to support Theistic Idealism, Ideal-realism or Panentheism. Let us take the latest theory of matter. According to it, there is as much systematic unity, harmony, order, reign of law in a minute atom as there is in the largest planetary system, and that, through the combination of such atoms, the entire material cosmos has been built up—a fact which suggests that the material world had its origin in a single mental power working according to plan and purpose. As Dr. Flint remarks, " What does this mean, if not that every ultimate atom of matter is full to the very heart of it with evidences of the power and wisdom of God, and that every particle of dust or drop of water is crowded with traces of the action of the Divine Reason, not less marvellous, it may be, than those which Astronomy exhibits in the structure of the heavens and the evolutions of the heavenly bodies?" (*Theism,* p. 116).

In like manner it may be shown that the theories advanced by Lord Kelvin and Faraday are consistent with the belief in God. According to Lord Kelvin, the atoms are rotating portions of a perfect fluid, and, as such, are indestructible, for rotation once commenced in a perfect fluid will continue for ever. But, as Dr. Flint points out, "There is nothing in a perfect fluid to account either for the origin or cessation of rotation. . . . The origin and cessation of rotation in fluids are due to their imperfection, their internal friction, their viscosity. The origin or cessation of rotation in a perfect fluid must be the effect of supernatural action ; in other words, every vortex-atom must owe the rotation which gives it its individuality to a Divine impulse." (*Ibid.*, p. 115). Finally, it may be said with regard to Faraday and Boscovitch that these writers have themselves admitted the existence of one universal mental energy as underlying material phenomena. Referring to their theory, Dr. Flint observes that "this view, that what alone substantially underlies all the phenomena we designate material is an acting mind, an energizing will, has not only been reached by mental philosophers and idealistic speculators, but by those physicists who, like Boscovitch and Faraday, have found themselves forced to conclude that what is constitutive of matter is not indivisible particles, even infinitesimally small, but mere centres of force, since force necessarily implies some sort of substance, and, therefore, spirit where not matter." (*Ibid.*, p. 112).

✓CHAPTER IX. whole

THE WORLD OF LIVING BEINGS.

(PROBLEMS OF LIFE).

§ 1. Preliminary remarks.

In the world of our experience, realities are found in three forms :—(1) inanimate or non-living; (2) animate or living; and (3) mental or conscious. Hitherto we were dealing with inanimate or non-living material things. We have now to deal with beings which, while they possess material bodies, have also the attributes of life. Now, several questions are to be discussed here. What are the points of difference between a living and a non-living being? Is a living organism merely a delicate and complex machine, or is it something more? What is the origin of life? How have the various species of living beings (plants and animals) come into existence? These are the main questions to be discussed in philosophy of life.

✓ § 2. Mechanism and life contrasted. Meaning of machine, organism and organisation.

A machine may be roughly defined as an aggregate of a number of material parts, so collocated and adapted to one another in shape, size and position as to produce, through their interaction and co-operation, one joint result (*e.g.*, a watch, a steam-engine). Now, a living body is also made up of a number of parts collocated and adapted in such a way as to produce a joint result. It thus far resembles a machine. The question, therefore, naturally arises: How does a living organism differ from a machine? Is there any difference between the two? Or, is a living body merely a more complex machine?

to place together, to arrange

to fit, Joint for

Now, when we closely examine a living organism, we find that it possesses certain characteristics which are wanting in a machine. In a machine the parts are put together or combined from outside by some external energy. In the case of an organism the parts are evolved from within and made to co-operate by a power seated within. In other words, a machine is an *artificial* whole, whereas an organism is a *self-developed* whole; a machine is *made*, whereas an organism *grows*. A living organism has the powers of developing itself by differentiation and integration of parts and functions, of assimilating materials from without for its own nourishment, of repairing itself, and of reproduction or giving rise to a new living being out of itself. Thus, growth from within, assimilation from without, self-repairing and propagation or reproduction are the distinguishing features of life. But these characteristics are never found in a machine. A machine, therefore, is a non-living thing.

We are now in a position to understand the meaning of organic unity or organization. A living organism is not a mere aggregate or combination of parts. It is a systematised unity of members, organs or parts which carry on different functions needed for the working out of a common end (*viz.*, the preservation and health of the whole). As Dr. Caird says, "The totality here is something more than the mere sum of the parts. There are infused into the parts the elements of order, proportion, diversity of form and distribution of functions according to a general end." (*Philosophy of Religion*, p. 99). In fact, it is the life or the vital power of the whole that evolves and vitalizes the parts and gives them their connection. The whole is necessary to the parts, and the parts to one another and the whole. As Dr. Flint says, "In every plant and animal the whole is not merely composed of the parts, but acts as a whole through and by its parts, each part needing, conditioning, and influencing the whole, and the whole needing, conditioning, and influencing the parts." (*Anti-theistic Theories*, p. 166). A living organism has thus the unity of reciprocal action and influence. It is a 'unity in plurality'—a single connected whole, of which all the elements, parts and energies are co-ordinated by a central immanent power to its self-preservation and self-perfection. This is what is meant by saying that a living being is an organic unity.

✓ § 3. **Origin of Life.**

We have next to discuss the question of the origin of life. Two main theories are possible :—

(1) The theory of *spontaneous generation* or *abiogenesis* and (2) the theory of *biogenesis*.

hypothesis the living matter arises from non living matter

1. According to the first theory, life arose spontaneously out of non-living matter. It assumes that, through the fortuitous combination of the atoms of certain elements (*e.g.*, Carbon, Hydrogen, Oxygen, Nitrogen), elementary forms of life known as *protoplasmic cells* were produced in the beginning, and that the various species of plants and animals have been gradually evolved out of them. (See Ch. X).*

happening by chance
দৈবক্রমে সংঘটিত

Criticism.

(i) The theory of spontaneous generation or abiogenesis has not been scientifically established.

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* This theory of the origin of life has been accepted by the advocates of Materialism and Naturalism. These thinkers contend that all the phenomena of life can be explained by means of the processes of inanimate matter, and that, therefore, the hypotheses of a special vital force and a Creative Mind are absolutely unnecessary. In support of their theory that life is a product of matter, modern materialists generally adduce two facts :—(i) the identity of living bodies with inanimate objects as to substance—when the body of a living being is analysed, it is found to contain only such elements as Carbon, Hydrogen, Oxygen, Nitrogen; (ii) artificial production of some organic products, *e.g.*, bile, sugar. For a full account of Materialism, see Ch. XXI, Philosophy of God. See also Ch. X.

fortuitous concourse of atoms.
অনুদ্দিষ্ট পরমাণু-সংহতি

A series of experiments performed by Pasteur, Tyndall, Lister and others has practically established that life always comes out of previous life, and that there is no such thing as spontaneous generation of life out of non-living matter. It was formerly assumed that the origin of microscopic living organisms called bacteria or bacilli and infusoria was a clear instance of spontaneous generation. But latterly it has been experimentally found that when all previous bacterial life contained in any substance is completely destroyed, and air and water containing living germs are rigidly excluded from the substance, then no bacteria appear, however long it may be kept—a fact which shows that they do not originate spontaneously, but from previously existent living germs.

(ii) It is true that some substances, which were once supposed to be products of living organisms alone, have been produced artificially out of inorganic elements. It is also true that the chemical constitution of the body of a living being is now well known, and that it is found to be composed of such inorganic elements as Carbon, Hydrogen, Oxygen, Nitrogen. But these facts do not support the theory of Abiogenesis or help us in bridging over the gulf between matter and life. All the substances that have been produced artificially have been found to be *dead* or *lifeless* objects; scientists have not been able to impart life to them. The chemical constitution of every organic matter—brain, blood, nerve, albumen, protoplasm itself—may be well known; but has any scientist been able to construct any substance which manifests a single vital property? A living body *does* contain the elements of which an inanimate object is composed; but still, so long as it is alive, it displays certain peculiar properties which are entirely different in kind from the properties of inorganic objects and which are wholly inexplicable on the purely materialistic (physico-chemical) principles.

As Dr. Flint rightly asks, "How can the power of acting from within—one to which there is nothing properly analogous in lifeless matter—come from without, from lifeless matter? How can mechanical and chemical forces result in a force which resists and rules themselves, and which enables that which possesses it to act of and for itself,—in a faculty of adaptation to circumstances, of selective assimilation, growth, inherent renewal, and reproduction?" (*Anti-theistic Theories*, p. 167).

(iii) Some supporters of Materialism or Naturalism (*e.g.*, Prof. Huxley and Tyndall), though admitting that there is no experimental evidence that life can arise save from antecedent life, believe that spontaneous generation of life out of lifeless matter occurred in the inaccessibly remote past.[*] But this view is quite unscientific—it implies a belief without evidence and against evidence. We are not justified in believing a hypothesis as scientific, in favour of which we do not find a single relevant fact. These thinkers themselves admit that every experiment undertaken to prove their hypothesis of spontaneous generation ends in confirming the opposite hypothesis. What reason have they, then, for supposing that spontaneous generation took place only once long ago? If matter could produce life at one time, how is it that matter does not produce life now? What physical and chemical forces did once, they are expected to do often, if not continually. Has matter now lost any known property or power which it possessed long ago, *e.g.*, when it was in a cooling condition? Has it been shown that its constitution has now been thoroughly changed? If not, how are we justified in accepting the hypothesis? It is universally admitted that matter is now better fitted for the *support* of life. If so, what reason is there for believing that it was ever more fitted than at present for *originating* life?

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[*] See Note at the end of this chapter.

II. Thus the theory of biogenesis—according to which all life comes out of previous life (*omne vivum ex vivo*)—appears to be the right one, and indeed no fact has yet been discovered which contradicts the theory. It is really based on universal and uniform experience.

But though life is always found to come out of previous life, the question may still be asked: What is the origin of the first life whence all life on earth is derived? Whence did the first living germs or beings arise?

Now, to explain the origin of life, we must fall back on the theory of a supreme mental principle viewed as the ultimate cause of the world. When we take into account the fact that there is a gulf between matter and life over which science can throw no bridge—when, at the same time, we reflect on the extremely complex adaptations of means to ends, and of lower ends to higher ones, that are needed for the production and support of life, the belief in the existence of a supreme mental power working according to plan and purpose is forced upon our minds. We must not suppose that adaptations of means to ends—differentiation and co-ordination of parts and functions—are found only in the case of higher organisms; even the most elementary protoplasmic cell (with which life begins, so far as we know) is an inconceivably complex system of co-ordinated atoms and molecules, subject to the control of the whole over the parts. How can such facts be accounted for? Only on the supposition that the evolution of living beings is guided by idea, plan and purpose.

Thus the theory of a Supreme Mind or God is justified; and this theory assumes three main forms:—

(1) The theory of *special creation*. According to this, the different classes or species of living beings were created by God at the beginning *all at once*, exactly as we find them now-a-days.

(2) The theory of creation combined with the theory of *evolution* (*Deistic* theory of evolution). According to this, God did not create the different species of living beings separately. He created at the outset a few living germs and gave them their power of development; and out of them the different species of living beings have been evolved without any further interference on the part of God.

(3) The theory of *Panentheism* or *Ideal-realism* (which is also *evolutionistic*). According to this, the evolution of the entire world-system is brought about and guided by one immanent idea or mental principle which realises itself as a concrete universal life and mind in and through the world-system, and finite life is simply a finite reproduction of the universal life.*

The question as to the origin of the different species of living beings is an important one and is fully dealt with in the next chapter.

NOTE.

ORIGIN OF LIFE.

A general account of the principal hypotheses as to the origin of life has been given in § 3 of this chapter. It has been pointed out there that the theory of Biogenesis which assumes that life always arises out of antecedent life seems to be the true one, and that, to explain the origin of the 'first life,' we must fall back on some form of the Theistic theory. We may briefly consider here the views of several eminent scientists regarding the origin of life.

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* The question "Which of these three theistic theories is the most satisfactory?" will be discussed in Philosophy of God. It may be simply remarked here that the theory of special creation is not favoured by modern science. See Ch. X.

(i) According to M. Pouchet, Crosse and Bastian, the theory of abiogenesis or spontaneous generation is the right one. But a closer scientific investigation carried on by eminent scientists, such as Huxley, Pasteur, Tyndall and Lister, has fully established the principle that life is always derived from antecedent life; and this is generally accepted now-a-days. "The present state of knowledge," says Huxley, "furnishes us with no link between the living and the not-living." (Article on Biology, in the *Encyclopædia Britannica*).

(ii) Huxley and Tyndall take up a peculiar position. They admit, as scientific men, that there is no scientific evidence in support of the theory that life can arise out of non-living matter. But still they believe that spontaneous generation of life out of non-living matter actually took place in the remote past. Thus Prof. Huxley remarks, "If it were given me to look beyond the abyss of geologically recorded time to the still more remote period when the earth was passing through physical and chemical conditions, which it can no more see again than a man can recall his infancy, I should expect to be a witness of the evolution of living protoplasm from non-living matter." Similarly, Prof. Tyndall remarks, "By an intellectual necessity I cross the boundary of the experimental evidence and discern in that matter which we, in our ignorance of its latent powers, . . . have hitherto covered with opprobrium, the promise and potency of all terrestrial life." A full criticism of this fanciful hypothesis has been given in p. 115.

(iii) According to Sir William Thomson (Lord Kelvin) and Helmholtz, living germs may have been carried to the earth in the clefts or crevices of meteoric stones—the fragments of shattered planets which once abounded with living beings.

On this theory we may make two remarks*:

(*a*) In the first place, this is not a theory of the origin of life

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* It is sometimes said that this is an absurd hypothesis, for the heat of meteoric stones must be fatal to life. But this objection has little value, for apparently the heat in a deep crevice of a large meteorite would not be so intense as to destroy a living germ.

as such, but only of *terrestrial* life; and this is admitted by Sir W. Thomson, a staunch supporter of Theism and Teleology.

(*b*) No positive evidence can be produced on behalf of it.

(iv) According to Dr. Zacharius, Prof. Preyer and others, life is co-eval with matter, has passed from nebula to nebula, and has been derived by our earth from the nebulous mass whence it was severed.

But this hypothesis is quite untenable. Life requires certain material conditions—*e.g.*, moderate temperature, and these are supposed to be absent from a nebula. How, then, can we suppose that life has come to the earth from the nebulous mass whence it was severed? Modern science supposes that the earth was too hot for life when it was detached from the nebulous mass, and that its surface gradually became cool enough to be habitable.

(v) Some speculators abolish the commonly accepted distinction between the living and the lifeless, the organic and the inorganic, and ascribe to every particle of matter a faint degree of life.

But this is a fanciful hypothesis. What is commonly called lifeless matter is certainly not alive in the sense in which a living being is alive. It is not found to possess any of the vital properties described in pp. 112-113. How, then, can we accept this hypothesis as scientific?

Conclusion. We conclude, then, that, in order to explain the origin of life, we must assume the existence of a supreme mental power working in and through Nature. Indeed, as pointed out before, when we carefully examine the constitution of living beings, we are constrained to believe in the existence of such a mental power. We may add here that, if "matter contains the promise and potency of all terrestrial life," as has been remarked, matter must be something very different from what it has hitherto been supposed to be—it must be subject to the operation of thought—its processes and transformations must have regulating idea or purpose immanent in them all.

✓ CHAPTER X. whole

ORIGIN OF THE WORLD.

(DOCTRINES OF CREATION AND EVOLUTION— MECHANICAL AND TELEOLOGICAL).

§ 1. Preliminary Remarks : Theories of Creation and Evolution contrasted.

We have discussed above in a general way the questions of the nature and origin of matter and life. We now proceed to consider fully the question of the origin of the world. There are two main theories of the origin of the world—the theory of *special creation* and that of *evolution*.

The theory of special creation, as commonly understood, consists in supposing that all the various classes of beings composing the world-system were created by God in the beginning in the same forms in which we find them now. According to this theory, there was a time when there was no being except God. Being perfect in Himself, He had no need of a world. But still at some point of time in the remote past, He thought of producing a world of finite beings, and then, by the mere act of His will, created such a world out of nothing. God said, "Let there be a world," and the world came into being at once. Thus, according to this theory, the world has not passed through a process of gradual evolution. God created at the outset all its contents —all its nebulæ, stars, suns, planets, satellites just as they now exist and the first representatives of all the different species of plants and animals which now fill the earth.*

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* This is a general account of the *Deistic* or *Popular Theistic* view of creation. This view is essentially *monistic*, for, according to it, the ultimate reality is *one*. But there are other monistic theories—*e.g.*, *Pantheism*, *Panentheism*. There are also *dualistic* and *pluralistic* views of the origin of the world. For a full account of these, see Ch. XXI, Philosophy of God.

The theory of special creation as explained above, simple though it is, no longer commends itself to the scientific spirit. Modern scientists, after a closer study of the structure and history of the world, have begun to favour the theory of evolution which consists in supposing that the world with all its various contents has come to be what it is by a slow process of development from a lower and simpler condition.*

Thus the theory of evolution appears to be the more scientific one. It is really supported by the evidences furnished by such sciences as Astronomy, Geology and Biology. But there is wide diversity of opinion regarding the nature and cause of evolution. Some suppose that the process of evolution is quite *mechanical* ; others suppose that it is wholly *teleological*. In other words, (some suppose that the process of evolution takes place automatically or spontaneously without being guided by a creative idea, thought or purpose ; others suppose that the process of evolution is guided by a thought, purpose, end or idea—that what we call evolution is simply the mode of operation of a Creative Mind or God.)

We see, then, that the theory of evolution assumes two forms—*mechanical* and *teleological*. The theory [illegible] of teleological evolution, again, may be *deistic* or *panentheistic*. According to the former, God is wholly *transcendent*, *i.e.*, outside the world-system. According to the latter, God is the self-realising *immanent* spirit of the world-system and guides the course of evolution from within. We have now to consider these theories separately.

✓ § 2. The Theory of Mechanical Evolution.

As has been said before, according to this theory, the process of evolution is quite mechanical or automatic. In other words, according to it, the changes which constitute the course of evolution are not guided by any intelligent activity, thought or idea, but are the results of the operation of the blind physical or mechanical forces of nature. This is the view of Tyndall, Huxley, Spencer and some others. The theory of mechanical evolution in its most complete form is found in the "Synthetic Philosophy" of Herbert Spencer who tries to prove that there has been one continuous process of evolution from primitive nebulæ up to the highest forms of human society. [illegible] [illegible], [illegible] নীহারিকার,

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* In the present chapter it is simply pointed out that the theory of *special creation* is opposed to the teaching of modern science. For a full account of the various difficulties involved in the Deistic theory of creation in time, see Ch. XXI, Philosophy of God.

He begins by assuming the laws of matter as explained in the physical sciences and tries with their help to account for the origin of the physical cosmos (or, to be more precise, of that part of the physical cosmos with which we are directly concerned and which is best known to us, *viz.*, our own solar system). He here uses the nebular hypothesis as propounded by Laplace. (*Vide* Cosmological Evolution below.) The explanation of the physical cosmos is found in Spencer's "First Principles" and "Essays".

He then discusses the question of the origin and development of the different species of living beings in his "Principles of Biology". Herein he employs the theories of biological evolution as worked out by Lamarck and Darwin. (*Vide* Biological Evolution).

He next considers the question of the origin and development of mind in his "Principles of Psychology."

He next takes up the questions of the origin and development of the social organisations in his "Principles of Sociology."

Finally, in his "Principles of Ethics" he tries to determine what our manners and customs should be, and why.

The entire series of works mentioned above constitutes Spencer's Synthetic Philosophy. Spencer supposes that the whole process of evolution is *mechanical, i.e.,* without the guidance of a creative idea or thought. He also assumes that this process is *continuous*, so that there are no gaps between matter and life, life and mind, and animal mind and rational mind. He admits that there is one absolute power which is the ground of all things, but declares that this is unknown and unknowable, and he even goes so far as to say that this absolute power is probably impersonal. It may also be pointed out here that, in explaining biological and mental evolution, he assumes throughout the doctrine of hereditary transmission of acquired powers and tendencies. Let us now consider cosmological and biological evolutions separately.

✓I. *The Mechanical Theory of Cosmological Evolution.*

As pointed out before, Spencer and other modern advocates of the theory of mechanical evolution, when trying to explain the origin of the physical cosmos, do not attempt more than a mechanical explanation of our own solar system. Here they avail themselves of the 'nebular hypothesis' of Laplace.* It is supposed by them that the matter of which the solar system is composed existed at a very remote period as a diffused nebula or cloud of gas, vapour or 'star-dust' and was gradually condensed into the globular bodies (the sun, planets, satellites) by the physical forces inherent in it, operating according to known physical laws. At the time of the condensation of the nebulous mass, some small masses or portions were detached or flung off. These condensed into planets, including our earth; and the still smaller portions that were thrown off by them at the time of their condensation formed the satellites or moons. The central mass became the sun.

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* It is of course tacitly assumed by these thinkers that other solar and stellar systems of the universe may be similarly explained. It may be stated in this connection that many nebulæ are still to be seen with a telescope in the outer regions of the sky. At one time they were believed to be clusters of stars like patches in the Milky Way. But now they are generally supposed to be composed of matter in an attenuated, diffused and gaseous condition. It is believed that the component particles of a nebula are in a state of intense agitation, motion or vibration and produce heat and light through their friction, and so we see the nebulous mass as an axis of light or a fiery cloud.

Thus, according to this hypothesis, the entire solar system was once in a nebulous state from which it has been gradually evolved into its present condition conformably to physical laws.

In this hypothesis a number of assumptions is made, *viz.*, the existence of nebulous matter and motion, the laws governing matter, a primitive collocation of the constituents of the nebula, and conservation of energy. The motions of the planets are explained as the resultants of the original projectile and repulsive forces and the attractive force of gravitation. The peculiarity of this hypothesis is that, according to it, the solar system was evolved out of the nebula quite *automatically* or *mechanically* without the guidance of any creative mind.*

II. *The Mechanical Theory of Biological Evolution.*

In the above way the earth was gradually formed and became habitable for living beings. The question now is: How are we to explain the origin of life and the various species of living beings inhabiting

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* It is said that when Laplace went to make a formal presentation of his work to Napoleon, the latter remarked: "M. Laplace, they tell me that you have written this large book on the system of the universe and have never even mentioned its Creator"; whereupon Laplace bluntly answered, "Sire, I had no need of any such hypothesis."

the earth? Now, the evolution of living beings is explained by evolutionists in accordance with Darwin's theory of 'fortuitous variations and natural selection' and Lamarck's theory of 'modification by the influence of environment.' (Darwin at first propounded the theory of fortuitous variation, but he afterwards combined it with the Lamarckian theory. This theory was also accepted by Spencer). It is assumed by the evolutionists that the various classes of living beings have been evolved out of a few living germs or protoplasmic cells. The question naturally arises in this connection: What is the origin of the first living germs? Some evolutionists adopt the theory of spontaneous generation to explain their origin. (See p. 113). But Darwin himself did not go so far. He suggested that probably the Creator "breathed the breath of life" into a few germs, and out of these germs various species of living beings were evolved according to the principles described by him without any further interference on the part of the Creator.*

Now, whatever may be the origin of the 'first life,' our main question here is:—How have the different species of living beings come into existence?

(*a*) The question has been answered by Darwin in his own way in his two famous works "Origin of Species" and "Descent of Man." According to him, "Species originate by means of Natural Selection or through the preservation of the favoured races in the struggle for life." He maintains that the various species of plants and animals have acquired their several characteristics by the slow and continuous accumulation of minute differences through countless generations, and that the human race itself has been developed through innumerable accumulated minute variations from some group of anthropoid apes whose own origin, again, may ultimately be traced to the humblest of organic things. Even man, therefore, is no distinct creation. His nearest cousins at the present day are the apes, and his pedigree extends backwards until it joins that of the lowliest zoophytes.

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* In the last chapter of 'Origin of Species', Darwin made the following concluding remarks:—"There is grandeur in this view of life, with its several powers having been originally breathed by the creator into a few forms or into one; and that, whilst this planet has gone cycling on according to the fixed law of gravity, from so simple beginnings, endless forms most beautiful and most wonderful have been, and are being evolved." Darwin thus far spoke like a deist, but most of his followers assumed that even these ultimate living germs were evolved out of inanimate matter quite mechanically. These followers of Darwin were thus supporters of materialism or naturalism, and even Darwin himself often spoke like a materialist. It may be added here that the hypothesis of spontaneous generation is still an unsupported one. (See pp. 113-119).

Let us now explain the theory more precisely. Life on earth began with a single living 'germ' (protoplasmic cell) or a small number of 'germs' (cells). Now, a living cell is known to have several characteristics :—(i) it multiplies itself by self-division : one cell multiplies itself by division into two cells, and each of these, into two others, and so on ; this characteristic makes physical growth and reproduction possible ; (ii) it varies spontaneously or fortuitously ; hence a new cell is never altogether like that from which it is derived ; (iii) it transmits its spontaneous variations by the law of heredity to the new cell derived from it. It is easy to see that these characteristics of cells have made the growth, multiplication and evolution of living beings possible. But one thing more must be remembered. The life of every living creature consists in a struggle for existence in the midst of circumstances in which it is placed. In other words, it has to struggle constantly to maintain its existence against other rival living creatures and the forces of Nature. In this universal struggle those living creatures that prove to be the fittest alone survive or maintain their existence ;

and they may be said to be selected by Nature as the fittest for existence to the rejection of a number of unfit ones.* It may be said, then, that the existing species of living beings are the surviving ones—*i.e.*—those that have been selected by Nature, so to speak, as fit for preservation.

What, then, determines the "fitness" or "unfitness" of creatures? How does the evolution of the different species and varieties of living beings go on? According to Darwin and his followers, living creatures are constantly undergoing spontaneous modifications or variations. No two creatures are or ever have been born exactly alike. Protoplasmic cells are extremely complex and unstable and therefore liable to variation ; and spontaneous variations in the germ-cells cause variations in the mature organisms. Now, fortuitous organic variations are sometimes beneficial to creatures in their struggle for existence, and sometimes detrimental. Suppose some spontaneous variations are useful to a creature in the struggle for existence. These beneficial changes or variations will be inherited by posterity, and perhaps they will go on increasing from generation to generation until at last through the assemblage or accumulation of variations in the same direction, a new species or variety of living beings quite fit to maintain itself in the struggle is produced. Again, the changes that are injurious may go on increasing through several generations ; if so, a new variety of creatures will be at last evolved totally unfit for the struggle, so that it will have to perish inevitably.

To sum up : new forms of structure are produced by fortuitous variations, and of these some help the creatures possessing them in the struggle for existence, and are handed down to posterity and go on accumulating from generation to generation ; while the injurious ones render creatures unfit for the struggle and lead to their speedy or final extinction.

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* Hence his theory is often called the theory of natural selection and survival of the fittest. See Note on Biological Evolution, Ch. XI.

In this way, the existing species of plants and animals have been formed by the accumulation of beneficial variations through countless generations, while innumerable other forms made their appearance and perished again, because they varied in the wrong direction. The crust of the earth is full of the fossil remains of the species which proved 'unfit' and died out in the struggle for existence.

The above is a general account of Darwin's original theory. As pointed out before, Darwin at first enunciated the principle of fortuitous variation, but he afterwards supplemented it by other principles* including the Lamarckian principle of modification by the influence of environment. According to his later view, organic changes may be partly fortuitous and partly brought about by external circumstances.

(*b*) *The Lamarckian theory of biological evolution* is as follows:—The variations in the living creatures do not arise fortuitously or spontaneously. They are drawn forth or caused by outward circumstances. The influence of environment or outward circumstances upon a creature prompts it to act in some peculiar ways for self-preservation. Such actions of a creature in response to its environment gradually change its form and adapt it to the peculiar circumstances, and produce the necessary organs and limbs. For instance, a creature may be compelled to crawl or swim or perform other modes of locomotion according to circumstances; and through constant exercise necessary organs in rudimentary forms are gradually formed. Thus, living creatures are moulded, as it were, by circumstances, and limbs and sense-organs are gradually developed agreeably to the creatures' wants or needs.

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* Hence his own theory of fortuitous variation occupies a smaller space in his later writings than in his earlier ones. Occasionally, when he was unable to trace certain modifications of animals in respect of form, colour and habits to their struggle for existence in relation to other species or external conditions, he suggested that they were due to *sexual selection*. He also appealed to the principle of *correlation of growth*. See Note on Biological Evolution at the end of Chapter XI.

It should be remembered that, according to this theory, the evolution of new organs is not the work of one generation only. The modifications and improvements that are acquired by parents are inherited by the offspring which, again, in their turn, acquire some improvements over and above what has been inherited by them. Thus, developments of organs continue to increase with each succeeding generation, and the species of living creatures become better and better adapted to the peculiar circumstances.

To sum up: according to Lamarck, variations are imposed upon creatures by the force of environment. These are transmitted by inheritance and go on accumulating from generation to generation, and thus at last give rise to new species. The environment compels the creatures to struggle for existence, and such struggle or effort in its different forms produces different organs and limbs. *Medium or environment, need or want, exercise, habit and heredity* are the factors which make biological evolution possible.

Comparison of the two hypotheses. Let us now compare the Lamarckian hypothesis with Darwin's original hypothesis. According to both, species are not fixed and immutable, and they have originated by development. But, according to the Lamarckian hypothesis, variations are imposed on living beings by the force of environment from without—they are acquired by creatures through interaction with the environment; according to Darwin's original hypothesis, variations are spontaneous, fortuitous, accidental—the spontaneous variations in the germ-cells cause the mature organisms to vary accordingly. According to the former, it is the hereditary transmission and the consequent accumulation of 'acquired modifications' that give rise to new species; according to the latter, the variations or modifications which are spontaneous are alone preserved and transmitted by interitance; and these account for the origin of new species. According to the former, function or exercise comes first, and creates a necessary organ; according to the latter, the organ comes first, and makes the function possible. According to the former, Nature compels creatures to struggle for existence, and this struggle develops the organs necessary to carry on the struggle. According to the latter, Nature spontaneously provides creatures with organs which are used in the struggle for existence.

§ 3. General criticism.

1. The theory of mechanical evolution leaves too much to chance. The explanation which is offered to us does not seem to be at all adequate, when we consider the nature of the things explained. Material atoms chaotically combined and material forces working blindly cannot be rationally thought of as producing the beauty, order and harmony of the world-system. Modern science has conclusively proved that order universally reigns even where elements out of which confusion might have arisen are present in abundance. It has proved that all things proceed under the influence of laws, unfailing and unerring, which apply at once to the minutest part and the mightiest whole. Now, how can we explain these facts on the mechanical theory? Do they not rather reveal the existence and operation of a supreme intelligence? Indeed, the extremely complex adaptations of means to ends—the wonderful signs of selection, combination and gradation that we find everywhere in nature, and specially in organic nature, force us to fall back on teleology. It

is inconceivable that the entire cosmos has arisen by a mere chance integration of matter. It is inconceivable that fortuitous variations and modifications imposed by the environment have brought about the sense-organs—the eyes, ears, and the like,—the vital organs—heart, lungs, stomach—and the organs of locomotion—fins for swimming, wings for flying, legs for walking—which are so wonderfully constructed and so perfectly adjusted to their respective functions. Think of the wonderful instincts of lower animals. Think of the structure and working even of such a tiny organ as the foot of an ant or the wing of a fly. Think of the constitution of a minute protoplasmic cell with which life begins, or even of the minutest material atom. (See p. 108 and p. 116). Does the explanation offered by the naturalistic thinkers seem to be at all adequate?

2. The doctrine of evolution, rightly understood, is not inconsistent with the theory of teleology. On the contrary, it supports teleology. Evolution is nothing but development, but the word 'development' seems to imply that a substance tends towards a *definite end*. Thus the idea of evolution, instead of excluding the idea of finality or teleology, seems naturally to imply it.

But let us consider cosmological and biological evolutions separately. Let us see whether they demand intelligence as their ultimate cause.

(*a*) Let us first consider the evolution of physical cosmos. When we carefully consider the nebular theory of evolution,* we find that it implies the existence of a guiding intelligence. As Dr. Flint says, "The solar system could only have been evolved out of its nebulous state into that which it now presents if the nebula possessed a certain size, mass, form and constitution—if it was neither too rare nor too dense, neither too fluid nor too tenacious; if its atoms were all numbered, its elements all weighed, its constituents all disposed in due relation to each other—that is to say, only if the nebula was, in reality, as much a system of order, for which intelligence alone could account, as the worlds which have been developed from it." (*Theism*, pp. 191-192). Indeed, when we consider the matter closely, the questions naturally arise in our minds: Whence was that primitive collocation of material substance which made evolution possible?* And why did that substance assume the orderly forms which we now see? It might have assumed an infinity of other forms. To answer these questions, we must fall back on Teleology.

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* This is only a plausible hypothesis. It may or may not be true. See *Nebular Hypothesis* in *Encyclopædia Britannica*. But even granting that it is a true hypothesis, we find that it is consistent with and supports teleology.

(*b*) Take again biological evolution. The development of higher organisms out of lower ones according to definite laws is itself a sign of the existence of a supreme regulative intelligence. "Development itself is not a cause, but a process—it is something which must have a cause; and the only kinds of developments which have yet been shown to be exemplified in the organic world demand intelligence as their ultimate cause." In fact, the characters and relationships of organic forms and the various biological laws governing their evolution, such as the laws of heredity, reproduction, variation, correlation of organs, imply the existence of a supreme intelligence guiding the course of biological evolution.

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* Even Huxley, one of the strongest supporters of naturalistic evolution, admits that the most thorough-going evolutionist must at least assume "a primordial molecular arrangement, of which all the phenomena of the universe are the consequences, and is thereby at the mercy of the teleologist, who can always defy him to disprove that this primordial molecular arrangement was not intended to evolve the phenomena of the universe".

We conclude, then, that the process of evolution is *teleological, i.e.*, it is regulated by a *purpose, thought, intelligence*. Evolution implies advancement by gradations or successive steps towards a definite end. But this advancement by gradations—this steady progress through means after means towards an end—is the mark, not of the operation of blind material atoms and forces, but of a conscious will—a steady purpose shaping and ruling all things.

3. The theory of mechanical evolution is unable to bridge over certain gaps.* In the first place, there is the great gap between the inorganic and the organic worlds—between matter and life. How can the mechanical theory explain the origin of life on earth? Supposing that science is able to explain the origin of the solar system with the help of nebular hypothesis, the question still arises: What about the transition from the lifeless to the living? There is no physical theory of the origin of life on the earth. The experiments performed by eminent scientists establish beyond doubt that life always comes out of previous life. Growth from within, assimilation and reproduction are the peculiar characteristics of living beings, but there is nothing in inanimate matter that can give rise to them. (See Ch. IX). Thus the gap between matter and life cannot be bridged over by the mechanical theory. In the second place, there is a gap between mere life and consciousness. The lowest living organisms, *e.g.*, plants, have life, but apparently no consciousness. The higher living beings have consciousness. How does consciousness arise? Last, but not the least, is the great gap between animal mind and rational mind. How does reason come into existence, seeing that the minds of the lower classes of animals are without reason?

We see, then, that the theory of mechanical evolution is unable to bridge over (i) the gap between matter and life, (ii) that between life and mind, and (iii) that between animal mind and rational mind.*

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* These are called 'hitches in evolution' by Dr. Martineau. See also Dr. Ward's Gifford Lectures on Naturalism and Agnosticism.

4. According to the Lamarckian theory, the modifications acquired by living creatures through interaction with their environment are transmitted to posterity, and the theory was accepted by Spencer, and even by Darwin. But Weismann and his followers are of opinion that such "acquired modifications" cannot be transmitted to succeeding generations. Only spontaneous and inborn germinal variations can be inherited by the offspring. According to them, 'acquired characters, modifications or variations,' whether beneficial or not, cannot at all affect or cause variations in the germ-cell out of which the new living creature is born, and thus cannot be transmitted to the succeeding generations; and this being the case, the Lamarckian theory that species are developed and new organs and limbs are formed through the accumulation of acquired variations in the course of many generations, falls to the ground. They maintain that only internal variations of the germ-plasm—*i.e.*, modifications occurring spontaneously within the germ-cell can be transmitted to the new cell derived from it. Hence the Lamarckian theory should be rejected, and Darwin's original theory of spontaneous variations should be taken to be the right one. It may be added here

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* If it is supposed (as has been supposed by some) that life is always accompanied by some degree of consciousness, even then it must be admitted that there are at least two gaps or hitches in the ascending scale of evolution. In other words, it must be admitted that the mechanical theory cannot explain how the mechanical processes of physical nature came to be supplemented by conscious life, nor how mere conscious life came to be supplemented by self-consciousness, rationality and morality. That there is a wide gap between matter and conscious life has been admitted by Tyndall, a staunch supporter of Materialism. Spencer also admits that two volumes of his Synthetic Philosophy are missing—the volumes that would connect inorganic with biological and mental evolution.

that the theory of Weismann is generally accepted now-a-days.*

Now, supposing that the theory of Weismann is right, we may say that it is quite consistent with Teleology. The spontaneous variations of the germ-cells have been looked upon as 'fortuitous,' 'accidental,' or due to chance by Darwin and many of his followers. But it is difficult to understand how fortuitous variations can bring about the evolution of the various forms of living beings with their complicated structures. We may more reasonably suppose that the internal germinal variations which determine the evolution of organisms are not fortuitous, but are brought about by a plan, purpose, or idea immanent alike in the organic and inorganic world. It is this 'idea' which is the source of all changes (including the internal modifications of germs) and gives direction to them.

5. But it is not necessary for us to enter into the controversy over the transmissibility of acquired characters. We have not to take sides, whether *pro* or *contra*, in this debate. Let the biologists fight out the battle amongst themselves. It will be sufficient for us if it can be shown that no form of evolutionism can dispense with the principle of *finality* or *teleology* without falling into absurdity. In other words, we have *simply* to show that the Lamarckian or the Darwinian hypothesis *by itself*, and *without the help of teleology*, cannot explain the origin of the different species of living beings with their complex organs. Let us first subject the Lamarckian hypothesis to a searching criticism :

(i) It is well-known that Lamarck and his followers attach great importance to physical medium or environment. But the question is : How far does its influence extend according to them? Are we to suppose that the medium has a *plastic* action and that living beings are entirely moulded by their media? In other words, are we to suppose that living beings are related to their media as a lump of soft wax is in relation to the hand that models and kneads it? There is not a single fact established by science which would justify such a supposition. Modern science admits that the external medium exercises *some* influence on the strength and even the form or appearance of the organs of a living being; but it is careful at the same time to point out that the actions of the medium, so far as they can be known and observed, do not penetrate very deeply into the organisation. What seems capable of being most easily explained by the action of environment is the colour of the skin, and yet it is still a matter of dispute among the scientists. No modern scientist ventures to maintain that the various complex organs, so skilfully arranged, have been brought about and moulded entirely by external circumstances.*

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* See Note III at the end of this chapter.

(ii) But it is not necessary for us to discuss this point more elaborately; for Lamarck himself and most of his followers admit the insufficiency of the principle of medium and attribute to it a *perturbing* or *exciting* rather than a *plastic* or *moulding* action. The true formative principle, according to them, is an inner power—the *power of life*. It is this power which brings about the progressive complication of organisms. It

is this which adapts all the parts of a living being to their respective uses, and binds them together for the realisation of a common end. The external medium or environment affects, disturbs or excites this internal power, creates needs, and has thus some control over its operation. But this admission makes the teleological conception absolutely necessary. How can the mere power of life, operating blindly, adapt all the parts of a living being to their respective uses? How can it evolve organs necessary for the satisfaction of needs or wants? How can it accommodate the creature to the conditions of its existence? Do we not find here signs of plan and purpose? We must, therefore, dive deeper—we must go behind the life of the individual and recognise the presence and operation of a higher and universal life—an intelligent regulative principle operating according to plan and purpose. We must suppose that it is this power which evolves and supports life—which evolves the necesary organs and accommodates the living beings to the conditions of their existence.

(iii) Indeed, the more closely we consider the Lamarckian hypothesis, the more clearly we understand the indispensableness of the teleological conception. We know that, according to Lamarck and his followers, *need*, *effort*, *exercise* and *habit* are the agents which have made biological evolution possible. Lamarck lays down two principles—(1) need produces organs, (2) exercise and habit develop and strengthen them. But how can a mere need create an organ? The need must be either a *felt* or an *unfelt* one. If it is a felt need, it gives rise to an effort; but how can the combination of the need and the effort so regulate the elements of the body as to produce precisely the kind of organ necessary for the satisfaction of the need, and exactly at that part of the body where it would be most helpful? The need, even when felt, is generally vague; the effort is uncertain. It is inconceivable how they can bring about or develop new organs and limbs even in rudimentary forms.* It is true that an existing organ can be strengthened and made to grow somewhat in size by use, effort or exercise. But effort or exercise can never go to the length of creating even the rudiments of a complex organ. It can never compass so profound a change as an increase of complexity and a difference in arrangement.† Modern Biology is forced to admit this. If, therefore, we believe that a highly complex and refined organ possessed by man, such as an eye or an ear, has been developed out of a far less complex and differently constituted organ possessed by the lowest class of animals, we must admit the operation of something more than need and effort. The cases where the need is not a felt one present a greater difficulty. Here there can be no such thing as an effort; and the question arises: How can an *unfelt* need create a new organ? How can it make the fluids of the body converge precisely towards the point where the production of an organ would be necessary? How can it create an organ appropriate to the medium in which the creature lives? These questions cannot be answered by the Lamarckians.

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* As Prof. Janet observes, "Certain animals breathe by means of lungs, and others by gills, and these two kinds of organs are perfectly appropriate to the two media of air and water. Can we conceive that these two media have been able to produce apparatus so complicated and so well adapted? Of all the facts established by science, is there a single one which could justify so great an extension of the action of media?... Among scientists, is there one who would venture to maintain that he in any way perceives how light could have by its action produced the organ that is appropriate to it, or even, if it is not light, what external agent is powerful, clever, ingenious enough, a sufficiently good geometrician, to construct that marvellous apparatus which caused Newton to say, 'Could he who made the eye have been ignorant of the laws of Optics?'" (*Final Causes*, pp. 233-234).

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* As Prof. Janet observes, "An animal feels the need of escaping dangerous enemies; it makes an effort to move its members in the direction in which it would most easily escape from their pursuit. How shall this effort and the need combined succeed in making the anterior members take the form of the wing, that machine so delicate and so wisely combined that all the acutest mechanism of man can hardly guess how it can be imitated?" (*Final Causes*, p. 237). He points out that its formation requires "something else than a vague need and an uncertain effort." (*Ibid.*, p. 238).

† Prof. Bergson, a distinguished modern thinker, with a profound knowledge of Biology, points out that "never has an *effort* been known to produce the *slightest* complication of an organ, and yet an enormous number of complications, *all admirably co-ordinated*, have been necessary to pass from the pigment spot of the infusorian to the eye of the vertebrate." (*Creative Evolution*, p. 82). Bergson finally falls back on *Vitalism*, the theory of an *original and universal vital impulse or power*. It may be added here that Vitalism, to have any meaning and to be distinguishable from Materialism, must rise into complete Idealism.

Lamarck admits that it cannot be proved by experience that need can produce organs, but he says that the truth of this proposition is deduced from another proposition supported by experience, *viz.*, that exercise and habit develop organs. But there is a wide gap or abyss between these two propositions. From the proposition that exercise and habit develop organs which *do exist*, we cannot anyhow pass to the proposition that need creates organs which *do not exist*. As pointed out above, exercise increases the strength, size and facility of an organ, but it does not multiply any organ, nor does it affect its essential structure or increase its complexity.

(iv) Thus the Lamarckian theory is surrounded with difficulties. Nevertheless, many Lamarckians speak of 'exercise' or 'function' making an organ. It has already been pointed out that exercise or function simply develops an existing organ. We may show the inadequacy of the theory in another way. The question may be raised: How can there be a 'function', in the proper sense of the term, before the existence of a proper organ or mechanism? Let us imagine an animal wholly deprived of organs of vision, hearing and locomotion. Can it be said that there is in such an animal the *function* of sight or hearing or motion? Here there can be no question of *function*, but perhaps of an *idea* or *desire* of a function. But, again, it may be asked: How can there be in an animal the *idea* or *desire* of a function without experience and the exercise of an organ? All that we can say is that the living being has the *need* of some function and therefore of the appropriate organ. We are thus driven back to the hypothesis that 'needs create organs' which has been criticised above. In fact, this is fanciful in the extreme and admitted by the Lamarckians themselves to be 'very vague' and 'not proved by experience'. It cannot be admitted that the simple need of assimilating foreign materials as food produced the organ of digestion, the need of seeing produced eyes, the need of hearing produced ears; and even if it were admitted to be true, it would be a striking proof of teleology; for it would imply that the elements of the body are so constructed and adapted and are so wonderfully in accord with the needs of life, that, as soon as a need arises, the whole body is modified, and a new organ begins to arise in the proper place.

We conclude, then, that we must dig beneath the need and effort of the individual and look for a deeper cause. We are forced ultimately to fall back on the theory that the evolution of the different species of living beings is guided by one Universal Mind, present and operative everywhere, of which all the forces of the world are expressions.

6. Let us now examine Darwin's original hypothesis. It can be easily shown that the range given to *chance* by this hypothesis is too great and quite inadmissible. We know that, according to Darwin, new varieties and species arise through the hereditary transmission and accumulation of fortuitous, accidental or chance variations. But a little reflection shows that the probability of new varieties and species being produced in this way is *infinitely small*. Let us begin by recalling to mind the substance of the Darwinian hypothesis. An animal undergoes some accidental modification (*e.g.*, a modification of colour); it transmits the variation to its offspring; the offspring not only inherits the variation, but adds to it, and passes it on to the next generation; and thus, by a slow yet continuous accumulation of minute variations of the same kind in the course of many generations, a new variety of animals is at last produced. But what is the degree of probability here? As admitted by all biologists, in order that the offspring may have

a good chance or probability of inheriting a certain characteristic and adding to it, it is necessary that both the parents should have the same characteristic; in other words, a male animal endowed with a certain characteristic must unite with a female animal of the same species possessing the same characteristic before the offspring or the issue will have a good chance of inheriting the characteristic and adding to it; and if this characteristic is to be transmitted and accumulated, the offspring must seek in its species another individual belonging to the opposite sex and having the same characteristic; and such union of individuals having the same characteristic must go on in the succeeding generations. It is only on this condition of a constant union of two similar individuals that variations, modifications or characteristics will be fixed and accumulated, and new varieties will be produced; else, deviating with each new couple, the modifications will grow weaker and weaker and finally disappear altogether. In *artificial selection* (such as is carried on by breeders of animals), a constant union of two similar factors is possible, because such selection is rational.* But how can we admit that a constant union of two similar factors will take place in Nature, if Nature operates blindly? How can we admit that a male animal with an accidental variation will *just seek* to discover in its species an individual of the opposite sex with the *same* accidental characteristic?† An organic modification, according to this hypothesis, is accidental and therefore very rare, and, consequently, there is little probability of its occurring simultaneously in individuals of different sexes; and supposing that it does occur, there is very little probability that two individuals having such characteristics will meet and unite. And supposing that such accidental union takes place in one generation, how can we admit that such union will again take place in the second generation, then in the 3rd, then in the 4th, and so on?*

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* See Note on Biological Evolution at the end of Ch. XI. It was *artificial selection* that first suggested to Darwin the theory of *Natural Selection*.

† As Prof. Janet observes, "The blind desire which conducts a male towards a female cannot have such a clairvoyance, and if it had, what a striking testimony for finality would it be!"

We conclude, then, that there is virtually no probability or chance of new varieties being originated in this way. We must assume the existence of a directive principle, a mind guiding the course of evolution before we can explain the evolution of new species and the formation of new organs. In other words, we must hold that Nature is evolved, animated and pervaded by a rational principle, so that what is called *natural selection* is at the same time *rational selection.*

Summary of the critical remarks.

1. Nature abounds with instances of complex co-ordinations and adaptations. Modern science discovers the presence of law, order, harmony everywhere in the world of experience. These cannot be explained on the Mechanical hypothesis, but rather point to Teleology.

2. An examination of the course of evolution reveals that it is guided by some directive principle. Thus we have to fall back on Teleology and accept the theory of Teleological Evolution.

3. There are several gaps and breaks over which the mechanical theory can throw no bridge, *e.g.*, the gap between matter and life.

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* Cf. Dr. Martineau's *Study of Religion*: "In order to preserve and transmit an advantage, it must accidentally arise twice over, once in each parent of the future stock. Even, then, the novel feature is far from being secured; if it reappear in one or more of the offspring, it is still a family peculiarity almost certain to disappear among new mates in the next generation." (Vol. I, p. 263).

4. The doctrine of hereditary transmission of 'acquired modifications' (on which the Lamarckian and Spencerian hypothesis of biological evolution is based) is rejected by many distinguished biologists at the present day, who hold that only internal variations of germ-plasm can be transmitted, and this modern view is consistent with Teleology.

5. Without denying the transmissibility of 'acquired variations', we may show the inadequacy of the Lamarckian hypothesis taken by itself; for the action of the environment and the mere need and effort of living beings cannot create new organs. Effort, practice, exercise or function can increase the strength and size of an existing organ, but cannot bring about increase of complexity and refinement or any essential change in the internal structure.

6. The Darwinian hypothesis of accidental variations and natural selection is also quite unsatisfactory. By attaching prominence to chance it makes itself quite unscientific. An accidental beneficial variation will, in the first place, be very rare; and consequently there will be very little chance of its occurrence among individuals of different sexes; and secondly, individuals of different sexes who may possess it will have no reason for meeting and choosing one another. Thus there can be no hereditary transmission and accumulation of accidental variations on which the Darwinian explanation rests.*

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* An attempt has been made by A. W. Bennet to show mathematically that the chance of perpetuation and accumulation of fortuitous organic variations is infinitely small. See Note at the end of this part. It may be added here that only a general criticism of the Darwinian theory of Evolution has been given in the present section. Some other points will be given in the sequel. For a full criticism, see Dr. Martineau's *Study of Religion*, Vol. I; Dr. Flint's *Theism*; Duke of Argyll's *Reign of Law*; Janet's *Final Causes*; Bergson's *Creative Evolution*; "*What is Darwinism?*" by Dr. Charles Hodge.

§ 4. The Theory of Teleological Evolution. Concluding Remarks.

We conclude, then, that we must fall back on the teleological conception of the world. But, as pointed out more than once, this does not imply that we reject the theory of evolution. What we accept is the theory of *teleological evolution*, and this is quite consistent with and supported by the results established by modern science. (According to this, there is a single mental power which regulates the course of evolution —which evolves, guides and controls the forces of the world-system and thereby realises some end.) Thus, according to this view, the evolution of the world is the realisation of a Divine idea or end. (See p. 121; also pp. 131, 132).

But here we should distinguish between the Deistic and the Panentheistic or Semi-Pantheistic conceptions of teleology, *i.e.*, between the theories of 'external finality' and 'internal or immanent finality', as they are sometimes called. (*Vide* Note 1, pp. 146-149). According to the former, God, who is a self-conscious personal being, first formed a plan or idea of the world within His own mind, and then realised or worked out the idea by actually evolving the world-system outside Himself, just as a human being first forms an idea of a machine or a building in his mind and then realises the idea by producing the designed thing in the outer world—the essential difference being that a human being is *provided* with necessary materials, whereas God has to *create* all materials out of nothing. God watches over the world and interferes in its working only occasionally, *i.e.*, in times of emergency, though, generally speaking, the world-process goes on without any Divine interference.* This view, therefore, makes God

wholly *transcendent* or external to the world. According to the latter, God is the self-realising immanent spirit of the world-system—the evolution of the world being essentially His self-evolution—the process in and through which He 'realises' Himself as an actual, concrete, self-conscious living power. Thus all finite things and the ends realised by them exist for the sake of one ultimate, supreme or absolute end, *viz.*, the self-realisation and self-expression of the Supreme Being. (See p. 38; Note 1 at the end of this chapter; also Philosophy of God).

Which of these views, then, is the more satisfactory one? This is the question which now forces itself upon us. The question will be fully discussed in the sequel. (See Philosophy of God). It will be sufficient here to point out that the Deistic view of God as an external designer is too anthropomorphic, that is to say, makes God too much like a human being, and does not therefore appear to be satisfactory. Indeed, this view of complete Divine transcendence is not favoured by modern science which is tending more and more towards the view that the world is a single unitary system and is the expression of a single ultimate power or energy immanent in it. Now, from the universal presence of law and order, from the innumerable adaptations of means to desirable results that we find in the world, it appears that this is a living, rational power. The whole trend of human thought has been towards such a view, and it is strengthened by epistemological, moral and other considerations. (See 'grounds of belief in God' in

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* The Deistic theory of Divine transcendence or External Finality may or may not be combined with the Theory of Evolution. It is often combined with the theory of Special Creation (see p. 120). But it may be consistent with the Evolution Theory. Thus it may be maintained that God did not create at the outset the world in its present condition. He created only certain materials, implanted certain forces in them, and gave them certain collocations or arrangements, and then left them to themselves, and these materials and forces, working by themselves outside and independently of God, have brought about the present developed condition of the world. He created at the outset a few germs and 'breathed the vital power' in them, and out of them the different species of living beings have been evolved (See p. 125).

Philosophy of God). God, therefore, is not a 'distant deity.' He is, as Armstrong very aptly says, "the Energy, the Will-power, the Spirit that flows through the whole, conscious at every point, with attention concentrated everywhere." In the words of Wordsworth, He is the being—

> "Whose dwelling is the light of setting suns,
> And the round ocean and the living air,
> And the blue sky, and in the mind of man."

Thus, according to this view of the immanence of God, all things are inter-related as factors of one organic whole, one vast connected system. Thus one spiritual principle or idea governs the entire universe—one rational energy regulates every process—one rhythm throbs in every constitution. Nothing is accidental; nothing is unmeaning; every constituent of the world fulfils some function as a factor of the whole.

NOTE I.

TELEOLOGY OR THE DOCTRINE OF FINAL CAUSES.

The word 'Teleology' comes from two Greek words: *telos* (end) and *logos* (discourse, reasoning). The expression 'final cause' also means an end. Hence the Doctrine of Final Causes or Finality or Finalism means the same thing as *Teleology*.

What, then, is meant by the word 'end' here? And what, again, is meant by the "doctrine of Teleology or Final Causes"? By the word 'end' is meant a purpose, an object aimed at, that for which one acts or towards which one tends. By the doctrine of Teleology or Final Causes is meant the view that, in this world, things are adapted as means to ends, and these to other ends, and all finally to one ultimate end, by a mental power.

But here an important question arises: Is the end that is realised by the world *external* to it? Or, is it *internal*—*i.e.*,—immanent in it? Is the creative power inside or outside Nature? In the works of human art, contrivance and design, we find that the ends that are realised through them are external to them. A man first forms in his own mind an *idea* of a certain end and the means or subordinate ends necessary for its realisation and then realises the end with the selected means in the external world. Take, again, the growth or development of a living being out of a germ. Here the end that is realised by the object evolved is not outside the object, but immanent or inherent in it. The end is the self-realisation or self-development and preservation of the vital power or life-force which is the formative power present potentially in the seed or germ. The end constitutes the very essence of this force or power. The power or potentiality of life which is present from the very beginning perfects or preserves itself by evolving different parts and making them operate together.

We are now in a position to discuss the question with which we started and to understand the doctrines of external teleology or finality and immanent finality. Is the Divine end which is realised by the evolution of the world external to it? Or, is it internal? The Deists suppose it to be external; they say that the end was present at first in the form of an idea in the mind of God who remains outside the evolved world. They thus liken God to a human designer, artificer, maker, contriver or architect, and accept the doctrine of external teleology. (See Philosophy of God, Ch. XX & Ch. XXI). The Pantheists and the Panentheists, however, suppose that the end of the world is immanent in it. They say there is a single ultimate energy which is essentially mental and which realises itself as an actual self-conscious power by evolving from within itself the vast and manifold universe. (See pp. 145, 146; also Philosophy of God, Ch. XXI). Thus, according to them, the evolution of the world implies the self-evolution of the Absolute mental life, somewhat as the development of a living organism means the self-development of the life implicitly or potentially contained in the seed or germ.

The foregoing remarks make it clear that these thinkers accept the theory of immanent finality or teleology. Their view is correct, but the analogy between the Divine life and finite organic life must not be carried too far. A living germ has to draw, absorb and assimilate materials from without, before it can be developed. But the Absolute has nothing outside itself—it contains all the principles of development within itself and evolves the world entirely from within itself. Again, the power of life operative in a plant or an animal sub-consciously evolves and organises the different parts, but the Absolute power consciously evolves and co-ordinates all things. God is eternally realising Himself as an Absolute self-conscious power. God's end which we may conceive as the self-realisation of His potentiality and conscious life is ever realised, but His potentiality and consciousness being infinite, the end is never exhausted. It has been more appropriately said that the relation of God to the universe is analogous to the relation which exists between the self-conscious life of human soul and the human body. God is thus the soul of the universe. As a poet says, He is the

"Soul of those mighty spheres
Whose changeless path thro' heaven's deep silence lies:
Soul of that smallest being,
The dwelling of whose life
Is one faint April sun-gleam."

But even this analogy is approximately true. In other words, the relation of God and the universe is, *within certain limits*, analogous to the relation of the finite soul and the body; because (i) the finite soul or self is gradually developed in time; (ii) it does not consciously evolve the body; and (iii) it is not conscious of every process going on within the body. The nearest and the most expressive analogy will be the organic relation that exists between a self, ego or conscious mind and its system of conscious ideas and activities. God is related to the world as a conscious self or mind is related to the plurality of its ideas and activities. As the self is *in* its states and processes, ideas and activities, so God is *in* the things of the world; and as ideas and activities are *in* the self as factors of its life, so all things and minds are *in* God as factors of His Divine life. Again, as the self *with* its plurality of conscious states forms one concrete reality or

connected whole, so God or the Absolute *with* the things of the world forms one concrete reality or connected whole. Thus God is immanent in the world. But this immanence of God is in no way opposed to His transcendence. God is transcendent above the world, because (i) He distinguishes Himself as the subject and evolving principle from the world as His product and object, and (ii) because His infinite potentiality is not exhausted in the world, and, in fact, can never be exhausted in *any* system of finite things. This is the Panentheistic view, and appears to be the most satisfactory one.*

So much, then, for the theory of immanent finality and the immanence of God. Before concluding this section we may say a few words about what has been called the Teleological Argument for the existence of God. It consists in arguing from the evidences, signs, marks or indications of designing intelligence or purpose in Nature to the existence of a Supreme Mind as the cause of Nature; or, to be more precise, it consists in showing that there are innumerable facts and peculiarities in Nature which can be understood only on the supposition that there is a mind at work in Nature. (See pp. 130, 131). It is a very old, famous and striking proof of the existence of God, and, though objections have sometimes been urged against it, it has always been looked upon as convincing by all impartial judges. For a full account of the argument and the reply to the objections, see any treatise on Natural Theology. See also Philosophy of God, Ch. XXIII, for a general account.†

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* For a full account of this, see Philosophy of God, Ch. XXI. Some writers have supposed that the Absolute is an impersonal power immanent in the world. They have generally employed the Principle of Relativity to prove this. For a critical account of their view, see Philosophy of God, Ch. XXII & Ch. XXIII.

† It should be remembered that the Teleological argument as such is not based on any speculation as to the ultimate end of man, the ultimate Divine end for the sake of which all things exist, and the like. As Dr. Flint says, "It is on no hazardous speculation of the kind that we rest our argument for the Divine existence." (*Theism*, p. 167). Such speculation is, of course, quite legitimate, and a philosopher may, and often does, speculate about these things (especially, if he is a meta-

NOTE II.

NATURE AND CONSTITUTION OF PROTOPLASMIC CELLS : DEVELOPMENT OF ORGANISMS.

In the present chapter, as also in the previous one, it has been remarked that life begins with what is called the protoplasmic cell. A brief account of the nature and constitution of protoplasmic cells is given below. For a full account, the student should consult some text-book of Physiology or Biology.

A protoplasmic cell is a very minute sac filled with albuminous matter known as protoplasm. On microscopic examination it is found to be composed of (i) *Protoplasm*, in which is embedded a roundish or globular body called the nucleus ; (ii) a *cell-wall*, in which the protoplasm is contained. Protoplasm is a homogeneous, granulated liquid substance endowed with contractility, with an appearance and a chemical composition allied to those of the albumen of an egg.

Now, a protoplasmic cell may be said to be the ultimate 'unit of life'; for every living organism begins its existence in the form of a cell. In fact, even the most complex organisms are made up of cells and substances or materials derived from cells.* "Every organised part of the body is either cellular or is derived from cells, and the cells themselves originate from pre-existing cells, and under no circumstances do they originate *de novo*. . . . The protoplasmic cell is itself the ultimate morphological element which is capable of exhibiting the manifestations of life." It should be borne in mind that protoplasmic cells have the property of multiplying themselves. A single cell divides itself into two, each of these into two others, and so on. It is this characteristic which makes growth and reproduction possible. See p. 126.

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physician and a teleologist); but the teleological argument, pure and simple, consists simply in arguing from marks or evidences of intelligence in Nature (such as order, reign of law, adaptation of things as means to particular definite and desirable results) to the existence of a Supreme Mind. The argument is so natural and logical that even J. S. Mill called it 'quite scientific'. See Philosophy of God for a general account.

[*] Thus the bark and wood of plants, and bones, flesh &c. of animals arise from the modification of cells.

Now, the lowest living organisms (*e.g.*, the amœba found in stagnant water) are *unicellular—i.e.*, the body of such a being consists of a single cell. It has, however, all the essential powers of life, *e.g.*, self-development, assimilation, and reproduction. Out of the body of such a living being, a new cell arises and becomes an independent being. But the higher organisms are *multicellular*. In other words, they are composed of many cells and materials derived from cells, all admirably co-ordinated and performing different functions.

It has been said above that every living being begins its existence in the form of a single cell. Indeed, even the extremely complex body of a higher animal begins in that way. It commences in the form of a 'fertilised egg'* which is nothing but a cell. It is a minute transparent sac, containing a mass of protoplasm in which is embedded a nucleus. Thus it is a nucleated cell ; and the power of self-multiplication by division inherent in it makes the development of the mature organism possible. The process of development of a mammal out of a fertilised egg has been very admirably described by Prof. Huxley in the following words : 'The first step . . . is the division of the nucleus into two new nuclei which recede from one another, while at the same time the protoplasmic mass becomes separated by a narrow cleft which runs between the two nuclei, into two masses, or *blastomeres*, one for each nucleus. By the repetition of the process the two give rise to four, the four to eight, the eight to sixteen, until the embryo is an aggregate of numerous small nucleated cells. These grow at the expense of the nutriment supplied from without and continue to multiply

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[*] The fertilised egg out of which the animal grows is the result of the fusion of two elements or germ-cells, known as *sperm* (derived from the body of the male animal) and *ovum* or egg-cell (derived from the body of the female animal). In plants, the bodies corresponding to the sperms and egg-cells or ova are contained in the pollen-grains and ovules or embryo-seeds respectively. But the mechanism of fertilisation and the process of development are different from those of animals. It may be added here that, among higher animals and plants, sexual reproduction is almost universal. Asexual or non-sexual reproduction is found among some low organisms.

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by division...until, long before any definite tissue has made its appearance, they build themselves up into a kind of sketch model of the developing animal in which model many, if not all, of the future organs, are represented." (*Elementary Physiology*, p. 306).

The above few lines give us some idea of the way in which the development of an organism takes place. "The whole process is so remarkable," says Mr. Watson, a biologist, "that it looks as though an invisible hand were at work, drawing out here, pinching there, and gradually moulding a complete little copy of the parent form." (*Heredity*, p. 14). Indeed, all such facts point to *immanent teleology* which we have maintained in this book. We see, then, that protoplasmic cells, by multiplication and modification of themselves, build up even the most complex organisms. It should be borne in mind that cells work *unmodified* in the more vital parts of an organism, *e.g.*, they constitute the gray materials of the spinal cord and the brain which regulate the working of the rest of the body.

A few words may be said in this connection about the evolution of the organic kingdom in general. We know that, according to the theory of evolution, the highest organisms arose by modification out of the lowest. Now, it is generally supposed by evolutionists that the lowest living organisms were *unicellular* and were neither plants nor animals, but combined the lowest characteristics of the two. These are called *protista*. Out of them there arose two classes of *unicellular* organisms—(i) *protozoa* (Lit., first animals) which developed the animal characteristics, (ii) *protophyta* (Lit. first plants) which developed the characteristics of plants. The protozoa developed into the different species of animals culminating in the human kind, and the protophyta into the different species of plants.

NOTE III.

LAMARCKIAN AND WEISMANNIAN THEORIES OF HEREDITY.

A critical account of Lamarck's theory of evolution has been given in pp. 128-140. It has been remarked in p. 134 that

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Lamarck and Weismann hold two diametrically opposite views with regard to variation and heredity. According to Lamarck, acquired variations are transmitted to succeeding generations; according to Weismann, they cannot be transmitted; only internal variations of the germ-plasm can be. A brief account of Weismann's theory and of the controversy over the transmissibility of acquired characters is given below.

The theory of variation and heredity, worked out by Weismann, a distinguished German biologist, is briefly called the Germ-plasm Theory. By it he has done more to stimulate research and discussion than any other biologist since Darwin. It is a highly complicated yet an interesting theory and has moreover an important philosophical bearing. Hence a general account of this theory should be given even in an elementary treatise on modern philosophy, though the question is really a biological one. Part of the theory has been discredited; but still the essential ideas involved in the theory have been widely accepted in modern times. The two fundamental ideas are—(i) continuity of germ-plasm and direct derivation of the germ-cells of one generation from the germ-cells of the preceding generation; (ii) non-transmissibility of acquired characters. Observation and experiment have led the majority of biologists to accept these ideas, though they are more cautious than Weismann himself, and, instead of saying dogmatically that acquired characters can never be transmitted, they say that the hypothesis of the transmissibility of acquired characters is *not yet a proved one*.

Now, Weismann, in explaining his theory, used a number of technical expressions, the meanings of which must be known to us before we can understand the theory. In the brief sketch of the theory that is given here, technical terms have been avoided as far as possible, but still there are a few which are important and unavoidable, and their meanings are accordingly stated first.

(i) *Acquired characters or modifications*—features or characteristics developed by an individual during his life-time in response to the action of the environment, or by effort, exercise, practice, and use and disuse of limbs.

The following points are to be carefully borne in mind :—

(a) An acquired character is one which is acquired *during the life-time of the individual*. Only such characters are technically called 'acquired' as actually make their appearance in the individual life-time. (b) Secondly, an acquired character is one which (as the name implies) is *not an inborn character*. An acquired character is one which is acquired or developed by an individual during his life-time owing to the influence of environment[*] or through interaction with the environment or by exercise or use and disuse of limbs. (c) Thirdly, an acquired character is a change produced on the *body* (and sometimes also in the *mind*) of an organic being, and not directly on its *germ-plasm*.

(ii) *Germ-plasm*. We next proceed to consider the meaning of another term that is frequently used, *viz*., *germ-plasm*. It means the germinal matter or substance which gives origin to new individuals.

(iii) *Germ-cell*. It means a reproductive cell, a cell containing germinal matter. A germ-cell coming from the body of an individual, after union with a germ-cell from another individual of the opposite sex, develops into a new individual. This is the law governing the reproduction of higher animals. The union of male and female germ-cells which precedes the development of a new individual is technically called *fertilisation*. The result of the fusion or union of two germ-cells is the fertilised egg. See p. 151, foot-note.

(iv) *Somatic*—an adjective derived from Greek *soma* meaning body. Hence the word means *bodily* or having reference to body. Weismann frequently speaks of 'soma', 'somatic cells', 'somatic changes'.

We now proceed to consider the theory of germinal continuity or continuity of germ-plasm. According to it, the whole of the germ-plasm contained in 'a parent germ-cell or egg' is not

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[*] By the word 'environment' are meant all external circumstances or outward conditions affecting an individual.

used up in the construction of the *body* of the offspring ; a portion is reserved unchanged for the formation of germ-cells of the offspring. Thus the germ-cell of an individual of one generation gives rise not only to the body of an individual of the next, but also directly to its germ-cells, so that the body does not produce germ-cells, but only contains them. The line of descent is from germ-cell to germ-cell, and the 'body-cells' in each generation are regarded as offshoots having no function in reproduction beyond that of guarding and nourishing the germs.

This may be made clearer in the following way. Let us suppose that a fertilised germ-cell divides itself into a number of cells which constitute a new individual. The body of the individual is constituted by the cells of the specialised organs, and bones, muscles, &c. which arise from the modification of the cells. But the germ-cells of the new individual are not formed from the body-cells, but are derived directly from the germ-cells of the preceding generation.

It should be remembered that, according to Weismann, though germ-plasm can be converted into body-plasm, body-plasm can never become germ-plasm, just as a mass of soft clay can be converted (by moulding, drying and burning) into a vase, but the vase can never be turned back into the original soft and plastic clay. Thus the germ-plasm is virtually independent of the body or 'somatic envelope.' The bodily envelope simply contains, protects and nourishes the germ-plasm. Following this line of thought, Weismann comes to the conclusion that modifications acquired by an individual—adaptations of his body to external conditions, effects of training, exercise, use and disuse of parts—cannot be transmitted to the offspring.[*]

Another idea involved in the view of germinal continuity is to be noticed here. According to it, the connection between the characteristics of one generation and those of the next is not direct, but indirect. The child's characteristics depend on the father's, not directly, but indirectly in the sense that both depend on the nature of the germ-plasm from which both alike are formed. As Prof. Doncaster says, "Germ-substance is derived from germ-substance, the body being a kind of offshoot from it. The child is like its parent, not because it is produced from the parent, but because both child and parent are produced from the same stock of germ-plasm." (*Heredity*, p. 144). "Similar material to start with, similar conditions in which to develop—therefore like begets like." How, then, is organic evolution rendered possible? It is through the hereditary transmission and accumulation of inborn variations.

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[*] Modern biologists of the school of Weismann do not mean to say that nothing can affect the nature of germ-plasm. They admit that certain causes acting on the body may affect the germ-plasm. But they hold that the effect of any condition on the body will not be reproduced in the offspring, *in any representative manner*, through the germ-plasm.

We have now to consider as briefly as possible the arguments for and against the transmissibility of acquired characters. We may begin by saying that no positive evidence in favour of the theory of transmissibility of acquired characters has been found. If transmission of acquired characters were the rule, we should expect it to occur in a fair percentage of cases. Of the alleged cases of such transmission, some do not stand the test of close inspection, and the majority of remaining cases are capable of being explained consistently with Weismann's theory ; and there is reason to believe that the few cases that are not open to objection may be mere chance coincidences. The whole position has been summed up by Prof. Arthur Thomson, an impartial writer, in the following words : "The question resolves itself into one of matter of fact : have we any concrete evidence to warrant us in believing that definite modifications are ever, as such or in any representative degree, transmitted? It appears to us that we have not. But to say dogmatically that such transmission is impossible, is unscientific."

Let us take some concrete examples. (i) Haeckel cites the case of a bull whose tail was squeezed off by the slamming of a door. The calf of the bull was tail-less. But this may have been a chance coincidence. For mutilations and modifications produced artificially or experimentally on the bodies of animals have not been found to be transmitted to the offspring. (ii) A

case is quoted of a cow which lost one of its horns by ulceration ; it had afterwards three calves which "showed, on the same side of the head, no true horn, but a small nucleus of bone hanging to the skin". But this is no proof of transmissibility, for another explanation is possible. The cow with an ulcerated horn may well have had a naturally imperfect horn, which was readily attacked by disease, and the imperfection may have been increased by an inborn variation in the offspring. (iii) The Weismannians, again, on their side point out that the effects of training, exercise, habit, are not, as a rule, transmitted to the offspring. The son of a fencing-master does not necessarily become a good fencing-master, or does not become so more quickly than his father. If such a case is actually found out, we cannot infer from it that the habit of the father is transmitted to the child, for "certain natural dispositions in course of growth may have passed from the plasma engendering the father to the plasma engendering the son, may have grown on the way by the effect of the primitive impetus, and thus assured to the son a greater suppleness than the father." (Bergson).

(iv) "By far the most important evidence for the inheritance of the effects of mutilations is furnished by the experiments of Dr. Brown-Sequard on guinea-pigs. In these experiments operations were performed on the spinal cord and nerves of many individuals. In certain cases these operations were followed by a peculiar condition resembling epilepsy, and this condition appeared, in some few cases, in the offspring. In one of the most striking cases the sciatic nerve had been cut. The creatures, of course, lost sensation in their hind limbs, with the result that many of them gnawed off several of their hind toes. From these a small proportion of offspring were obtained which lacked several of their hind toes, or sometimes their whole hind feet."

But these conclusions, too, are open to criticism. "The operations by which epilepsy was produced were very severe in their effects on the nervous system and the whole constitution of the animals, with the result that few perfect young were produced. Many of the young were classed as generally feeble, many showed special defects in no way suggesting epilepsy, and a few were epileptic. The appearance of these few amongst a large number of imperfect offspring can hardly be regarded as evidence that the epilepsy, as such, was inherited. In the other case quoted the explanation has been suggested that the toes of the young guinea-pigs were actually perfect at birth, but were afterwards gnawed off by their dams. It is well known that rodents occasionally show a tendency to gnaw the tails or feet of their young, and it seems that this might well occur, especially as the habit had been previously somewhat developed".

(v) Again, the Lamarckians say that generations of giraffes have stretched their necks to reach the foliage of trees, and thus the neck of the giraffe has grown to a prodigious length.

But the Weismannians say that the giraffe has become long-necked, because "through many generations the longer-necked specimens have been able to reach more leaves than their shorter-necked fellows, and consequently have been able to live through times of scarcity, when the others starved. The longer-necked specimens have continually been preserved by Nature, and the race has become long-necked."

(vi) Quite recently two distinguished biologists, Sumner and Kammerer, have made some observations which seem to support the idea that acquired characters are transmitted to the offspring. It has been found out that "the changes produced in mice by rearing at higher temperatures are inherited in a slight degree. And even more striking results have been obtained by causing species of salamanders and toads to lay their eggs in water instead of on land, by which changes in structure are brought about. But further investigation is required to confirm these results." (Watson).

We conclude, therefore, that the question is still an open one. We must say, however, with Bergson, that "even if we take the most favourable view of the theory of the transmissibility of acquired characters, facts show that hereditary transmission is the exception, and not the rule. How, then, shall we expect it to develop an organ like the eye?" (*Creative Evolution*, p. 89). In fact, it may be said that, generally speaking, acquired characters have no echo in the offspring, and when they have, the modifications in the offspring have generally no visible likeness to the original one. Thus, the transmission of acquired characters cannot be an important factor in biological evolution, even if it be possible.

CHAPTER XI.

THE IDEA OF SPECIES.

(SPECIES-IDEA).

§ 1. Principal theories as to the nature and origin of species.

It is a well-known fact that living beings, *i.e.*, plants and animals are found in species or different kinds. A species of living beings consists of an indefinite number of individuals which are essentially similar in their structure and modes of life. We have here to consider briefly the principal theories as to the nature and origin of species. One of these theories has been fully considered in the last chapter.

(1) *The theory of the immutability of species* (as held by Plato, Aristotle and their followers).

According to this theory species are fixed and unmodifiable or unchangeable. Every species is an eternal and immutable type corresponding to something necessary in the ultimate nature of reality. Individuals come and go, but the species abides or remains constant.

How, then, do these thinkers explain the nature and origin of the different species? According to them, the whole universe is the working out or realisation of one absolute divine idea or plan. That absolute idea is being eternally realised, but, being infinite, is never exhausted. Now, every species has a special reason or ground for its existence in the divine idea—in 'the Idea of all ideas' which underlies and gives rise to the universe as a whole. Hence every species is an eternal and immutable type. The essence of a species is the special idea which realises or embodies itself by evolving and sustaining the individual members of the species. But as the idea is not completely or exhaustively realised in particular individuals, the species is continued, though individuals appear and disappear in time.

(2) *The theory of the mutability of species.*

Plato and his followers, as we have seen before, draw a sharp line of demarcation between different species. We have found that they maintain that every species has a special reason or ground for its existence in the heart of things. In direct opposition to this theory, it is maintained by the up-holders of the theory of mechanical evolution that species are mutable, changeable or variable. They are not fixed and eternal and have no eternal reasons for existence. They tend to change from age to age fortuitously and with changing circumstances. Through the accumulation of variations of changes in the course of many generations, new varieties and species spring up. Of these variations some are fortuitous and some are due to the influence of environment. (See Ch. X). The higher species are supposed to have arisen by slow yet continuous modifications out of the lower. It is further supposed that the evolution is not at all guided by reason, purpose or idea.

Critical and concluding remarks. It has been shown in the previous chapter that the theory of teleological evolution is the most satisfactory one. In accordance with this view, we must admit that "whatever is, is rational." Everything has a reason for its existence. A species, too, therefore, has a reason for its existence in the divine idea or plan of the world. Indeed, unless we suppose that there is a common reason, idea or essence underlying, evolving and supporting a species, it is difficult to understand its distinctness, uniformity and permanence. Thus far we agree with the Platonists. But we cannot say with them that the species are absolutely distinct from one another and are eternal and immutable types. We may say that the species are relatively fixed, for they have virtually remained the same as far back as human records reach. We maintain that there has been an evolution, and that it has been guided by idea or reason. Though we maintain that there is one eternal rational power underlying and evolving the world-system, yet the reason for the existence of a particular species may not be eternal. It is quite consistent with the principle of teleological evolution to hold that the reason for which a species exists at one period of the world's history may not exist at another period.

§.2. Universal and individual.

Our questions here are: What is the precise significance of the terms 'universal' and 'individual', and what is the relation of the individuals to the universal? Now, by the term 'universal' we mean the essence of the whole—the one essential power which evolves and sustains the individuals, gives them their unity and connection and thus makes them a single whole. In the case of a living organism the immanent power, plan or vital principle which evolves and sustains the organs and makes them one living system may be said to be the *universal* in relation to the *individual* parts. In the case of a species, the essence or the power which realises and embodies itself in the individuals and makes them members of the same species may be called the universal in relation to the individual members. In the case of the world-system as a whole, the Divine power or idea which evolves and sustains all the individual finite beings contained in the world and gives them their unity and connection may be said to be the universal in relation to the individual finite things.

We now proceed to consider the relation of the individuals to the universal.

We should here explain the doctrines of Realism and Nominalism (Individualism).

I. *The doctrine of Metaphysical Realism or the theory of universal essences.*

It maintains that the universal, being the essence, is more real than the individuals. It has assumed two forms :—

(*a*) The theory of *Universalia ante res* (*i.e.*, the theory that universals are prior to and independent of individuals).

(*b*) The theory of *universalia in rebus* (*i.e.*, the theory that universals exist only as embodied in individuals).

The former was apparently maintained by Plato and the latter by Aristotle. Plato seems to have assumed that the formative ideas or essences which make the things to be what they are, have a real and transcendent existence independent of things. Hence his theory is called that of *universalia ante res* (*i.e.*, universals anterior to things). He seems to have maintained that the essences existed as ideas in the Divine Mind prior to creation.

Aristotle, on the contrary, understood the universals or the formative powers to be essences, existing only in the things and making them what they are, but more real than the things themselves and grounds of their forms and qualities. According to him, universals, apart from their concrete embodiments in the particulars or individuals, would be mere abstractions.

The theory of Plato is consistent with *Deism* or *Popular Theism*. The theory of Aristotle is consistent with *Pantheism* and *Panentheism*.

II. *Metaphysical Individualism and Nominalism.*

In direct opposition to the above theory of Realism, Metaphysical Individualism denies the existence of universals. It maintains that there is no essential power underlying the universe as a whole; the universe is only a mechanical aggregate of a plurality of particular units. In other words, the world as a whole has arisen from the fortuitous combination of a number of atoms or units. It is thus a mechanical resultant of the operation of a plurality of materials and forces. Again, a class or species is nothing but the aggregate or the sum total of the particular individuals. There is no objective class-essence underlying or supporting the class. Finally, a living organism has no unifying principle underlying it—it is only a more complicated machine. Thus we see that Metaphysical Individualism is consistent with pluralistic systems of Philosophy.

NOTE I.

Nature of Concepts: Realism, Conceptualism and Nominalism.

Two distinct views have been maintained by the exponents of Metaphysical Individualism with regard to our class-ideas or concepts. Some say that our class-ideas or concepts have only a subjective existence and have nothing corresponding to them in the real objective world. In other words, it is maintained by them that we have the power of forming abstract concepts or general ideas after comparing individuals and noticing their points of similarity; but there is nothing real corresponding to such a concept. Others, again, go further and maintain that even the formation of subjective concepts or general class-ideas within the mind is impossible. What, then, is present in our minds when we speak of a class or species? Their answer is that we have in our minds only a general name and a concrete image of a particular individual taken as the specimen or representative of the whole class. This is the doctrine of *Extreme Nominalism* which denies not only the existence of a common essence in things, but also the ability of the mind to form a conception of anything common. It asserts that we can think of only individual concrete things, and indeed there is nothing really general and common to a whole class of things except the general name. Hence the theory is called *Nominalism*. Because we use general names, it is argued, we make the mistake of supposing that there are real concepts or general ideas and even objective realities corresponding to them. But this is a kind of self-deception arising from fallacy of language. How can there be, or how can we even conceive, such a thing as humanity or triangularity—a man who is neither young nor old, neither short nor tall, neither dark nor fair; or a triangle which is neither isosceles nor equilateral nor scalene? We can think only of individual concrete things, and whenever we use a general term, what is really present in the mind (apart from the name) is a concrete image of an individual taken as the specimen of the class.

The theory which supposes that we have the power of forming general concepts or class-ideas is called *Conceptualism*. It may be consistent with Metaphysical Realism as well as with Metaphysical Individualism. Thus it may be supposed that there are real class-essences, and we can form ideas of them (Conceptualism combined with Realism), or it may be supposed that there is no real class-essence pervading the things of a class, but, in thinking, we may form a notion of something common, *i.e.*, a general concept. (Conceptualism combined with Individualism).

Criticism of Nominalism and concluding remarks.

(1) The doctrine of Nominalism is consistent with a pluralistic system of metaphysics. But Pluralism is an inadequate theory—it is unable to explain the order and harmony of the world-system. (See pp. 98-99, also Ch. XXI, Philosophy of God).

(2) Nominalism, if carried out consistently, makes science and philosophy impossible. Indeed, extreme Nominalism takes away the very possibility of reasoning. Reasoning can become a true source of knowledge only if we suppose that things may agree in having a common essential nature and that we can form an idea of such a common nature. In other words, reasoning is possible if we accept Conceptualism and Realism (at least in a relative sense). As Plato remarked, "Whosoever denies that the essential forms of things have real existence and remain permanently the same leaves nothing whereon the understanding can lay hold and takes away the very possibility of reasoning" (Plato's *Dialogues*).

(3) The question what is present in our mind when we speak of a class or whether we can form true concepts or general ideas is psychological and need not be fully discussed here. It will be sufficient to say here that Conceptualism may be justified psychologically. Nominalism takes for granted that, whenever we think, we have to think in terms of concrete images. Introspection reveals, however, that, in actual thinking, we rarely take the time and trouble of picturing a concrete image of an individual taken as the specimen of the class. As soon as a general term is uttered, the meaning flashes through our minds, and we have the conviction that the general term stands for an indefinite number of individuals. It may be added here that the process of conception is partly sub-conscious.*

NOTE II.

BIOLOGICAL EVOLUTION :

We have explained and criticised above in a general way the Lamarckian and Darwinian theories of biological evolution. We propose here to make a few additional remarks, explanatory and critical, on the view of Darwin and to compare his view with the views of some other recent biologists.

As we have pointed out above, Darwin supplemented his original principle of 'fortuitous variation and natural selection' by other principles, *e.g.*, the principle of *correlation of growth* (otherwise called the principle of correlative changes), the principle of *sexual selection*, and the Lamarckian principle of modification by the *influence of environment* and *use and disuse of limbs*. The first and the last have been fully explained before. We have now to say a few words about the second and third principles.

We have also said above that it was *artificial selection* (such as is carried on by breeders of animals) that suggested to Darwin the theory of Natural Selection. (See p. 141). A few words, therefore, should be said here, by way of explanation, about *artificial selection* and the possibility of transition from it to *Natural Selection*. Finally, we have to compare the view of Darwin with the views of other recent biologists. Reference has already been made to the view of Weismann who rejects the Lamarckian theory accepted by Darwin as supplementary to his own hypothesis. But other biologists have propounded other theories, *e.g.*, the theory of Evolution by sudden variations (called Development by Mutations) advocated by Naudin, Bateson, Hugo De Vries, and others. This theory, too, should, therefore, be explained in a general way.

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* For a full account of the controversy, see Dr. H. Stephen's Psychology, 3rd edition, pp. 358-363.

I. Let us first-briefly explain and illustrate artificial selection and see how Darwin passes from it to Natural selection. As the name implies, artificial selection means *selection by man* for some end of his own. It is the method employed, for instance, by professional breeders of animals. Thus, when a breeder wishes to obtain the improvement of a breed in a definite direction, he selects such male and female animals for reproduction as possess in a remarkable degree some desirable qualities, *e.g.*, peculiar plumage, fine wool, flesh, swiftness, strength, smartness &c. From the offspring which inherit the parental qualities, selections are again made according to the same principle. In this way, the breeders obtain, in a comparatively short time, by summation of minute differences, fine breeds of animals—fowls, pigeons, sheep, goats, cattle, pigs, horses, dogs &c.—possessing some desirable qualities in a remarkable degree.

Now, the above cases illustrate artificial selection, *i.e.*, selection by man, for his own ends. Why should we not admit a sort of *Natural Selection*? Nature is the greatest of all breeders and selects individuals with certain variations for the propagation of the species (not deliberately like man, but unconsciously or unintentionally). But if there be natural selection—gradual selection of certain traits in living things to be intensified and strengthened, through a long line of slight variations, in the individuals of successive generations,—in what principle can we find the determining condition? Why, in the universal struggle for existence among living beings.[*] Only such as with their spontaneous variations are fitted for the struggle survive and propagate their kind. They are selected by Nature, so to speak.[†] It is easy to see that, according to this theory, evolution is exceedingly slow and has been rendered possible by the hereditary transmission and continuous accumulation of extremely minute or slight variations.

Critical Remarks. (i) The main defect of the theory has already been pointed out. It has been already shown that there is no passage from artificial selection to Natural selection as understood by Darwin and his followers. The whole difficulty arises from the supposition that Nature operates blindly and the organic variations are fortuitous. We should, therefore, suppose that the course of evolution is teleological (See pp. 140-143).

In artificial selection, man as a rational being chooses again and again two factors or individuals, both endowed with the character or quality he wishes to perfect, and thus brings about

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[*] According to Darwin and his followers, the life of every living creature is a continual struggle for existence against the external forces of inorganic Nature and against rival living beings. It may be added here that the struggle is partly due to over-production or high ratio of increase of living beings and the scarcity of the means of subsistence. The resources of Nature are limited; more living beings come into existence than what can be fed at the table of Nature; and thus there is a struggle. There is for a certain given number of animals a certain amount of subsistence, and the means of subsistence are not found in the same amount in all seasons of the year. Thus living beings have to contend or struggle for food. In this struggle the unfit necessarily succumb and the fittest alone survive. We here recognise the celebrated principle of Malthus, which has caused so much discussion in Political Economy and which is transferred by Darwin from man to the whole animal kingdom (See Ch. III of *Origin of Species*).

Thus we see that the struggle arises in various ways: a living creature has to struggle for self-preservation (i) against the physical conditions or the forces of nature, (ii) against its enemies which live and prey upon its species, and (iii) against its rival beings for food.

[†] It should be remembered that, with the Darwinians, the expression *Natural Selection* is only a figure of speech; for Nature which operates blindly and unconsciously according to them cannot *select* anything in the proper sense of the term.

in the long run a breed of animals possessing the desirable quality or characteristic in a remarkable degree. In order that natural selection may bring about the same result, natural selection should be rational; in other words, there must be a rational principle underlying Nature which brings about, preserves, accumulates and perfects certain organic characteristics and thereby evolves a new species out of some old one.

(ii) The truth of the teleological conception is corroborated by the fact that Darwin himself frequently uses teleological language. 'Contrivance'—'beautiful contrivance'—'curious contrivance'—'marvellous adjustments'—such expressions recur over and over again in his treatises. Here is one significant passage from his 'Origin of Species': "Nature's productions are far truer in character than man's productions; they are infinitely better adapted to the most complex conditions of life, and *plainly bear the stamp of a far higher workmanship.*" (Ch. IV).

In another passage which occurs in his treatise on fertilisation of orchids, he says, "The labellum is developed into a long nectary *in order to attract Lepidoptera,* and we shall presently give reasons for suspecting that the nectar is *purposely* so lodged that it can be sucked only slowly, *in order to* give time for the curious chemical quality of the viscid matter sitting hard and dry." (p. 29). As Duke of Argyll very aptly remarks, "Darwin exhausts every form of words and of illustration by which mental purpose can be described . . . . But this is not all. The idea of special use, as the controlling principle of construction, is so impressed on Mr. Darwin's mind that, in every detail of structure, however singular or obscure, he has absolute faith that in this lies the ultimate explanation." (*Reign of Law,* pp. 39, 40).

(iii) It appears from what has been said above that Darwin himself sometimes felt the necessity of teleology. But whatever may have been the opinion of Darwin himself, any one who studies carefully the facts collected in the excellent treatises written by Darwin is forced to believe in the existence of a mental power working in Nature. As Dr. Flint rightly remarks, "The works of Mr. Darwin are invaluable to the Theologian owing to the multitude of 'beautiful contrivances' and 'marvellous adjustments' admirably described in them. The treatises on the fertilisation of orchids and on insectivorous plants require only to have their legitimate conclusions deduced and applied in order to be transformed into treatises of Natural Theology. If Paley's famous work be now somewhat out of date, it is not because Mr. Darwin and his followers have refuted it, but because they have brought so much to light which confirms its argument." (*Theism*, p. 208).

(iv) The theory of fortuitous variations is inconsistent with the biological law of 'correlation of organs,' first clearly explained and illustrated by the great naturalist, Cuvier. According to this law, "Every organized being forms a whole—a peculiar system of its own, the parts of which mutually correspond, and concur in producing the same definite action, by a reciprocal reaction. None of these parts can change in form without the others also changing, and consequently each of them, taken separately, indicates and ascertains all the others. Thus if the intestines of an animal are so organised as to be fitted for the digestion of flesh only, and that flesh recent, it is necessary that its jaws be so constructed as to fit them for devouring live prey; its claws for seizing and tearing it; its teeth for cutting and dividing it; the whole system of its organs of motion for pursuing and overtaking it; and its organs of sense for discovering it at a distance. It is even necessary that nature have placed in its brain the instinct necessary for teaching it to conceal itself, and to lay snares for its victims." Stated briefly, the law runs thus:—"The organs are bound together by logical relations, and the form of each is determined by that of the others. Consequently, if a chief organ undergoes an important modification, all the other essential organs must be modified to preserve equilibrium."

Now, it is impossible to explain such phenomena by fortuitous variations and without teleology.

Darwin himself admits the truth of the above principle in his principle of *correlation of growth or correlative changes*. It is enunciated by him in the following way:—"The whole organisation is to tied together during its growth and development, that when slight variations in any one part occur and are accumulated through natural selection, other parts become modified." (*Origin of Species*, Ch. V). Now, here is a fact which points to teleology.

II. Let us now consider the law of sexual selection as enunciated by Darwin.* A little reflection will show that it is obviously teleological in its nature. Roughly speaking, it implies selection, by an individual of one sex, of an individual of the opposite sex having certain peculiar characteristics. According to Darwin, it is the female that usually selects, so that we may generally define sexual selection as the female's selection among her suitors. In his 'Descent of Man' Darwin gives a large mass of facts to establish that many peculiarities found in the male animals are the effects of sexual selection. Let us take the case of birds. Darwin says that "there is the severest rivalry between the males of many species to attract females by singing. The rock-thrush of Guiana, birds of paradise, and some others congregate; and successive males display their gorgeous plumage and perform strange antics before the females which, standing by as spectators, choose at last the most attractive partner." (*Origin of Species*, p. 106). He believes that "female birds, by selecting, during thousands of generations, the most melodious or beautiful males, according to their standard of beauty, have produced *a marked effect*" (*Ibid*). In short, he supposes that "when the males and females of any animal have the same general habits of life, but differ in structure, colour or ornament, such differences have been mainly caused by sexual selection operating through many generations." Thus, according to Darwin, many peculiarities found in the males—such as their various ornamentations, their contrivances for producing music, their glands for emitting odours—have been developed through sexual selection, these serving only to allure or excite the females. It may be added here that, in Darwin's opinion, it is the males that have generally been modified through sexual selection; the advantages or the superiorities possessed by the males have been transmitted to their male offspring. In a few cases, the females have been modified through sexual selection, the excellences possessed by the females being transmitted to their female offspring.

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* Darwin gave a tolerably clear sketch of this principle in his 'Origin of Species', Ch. IV; but it has been dealt with at full length in his second main work 'Descent of Man.'

Now, the principle of Sexual Selection, as explained above, is quite consistent with Teleology. We may ask the question: What is the cause of the instincts, tastes and the attractive variations spoken of by Darwin? How is it that the peculiarities in such cases are transmitted by individuals to the offspring of their own sex and go on accumulating from generation to generation? It appears from what has been said by Darwin on the subject that the generic ideal is unconsciously present in the individuals of one sex and manifests itself in their preference for those individuals of the opposite sex who most nearly approximate it. How can we explain this fact without teleology? The end of Sexual Selection is the production of melodiousness, beauty and variation in form and colour, and the like. Can blind physical forces, not subservient to a Supreme Intelligence, be conceived of as working towards so essentially ideal a goal as beauty and melodiousness?

VII. We have seen above that, according to Darwin, one species is formed from another by the accumulation of extremely minute, infinitesimal or insensible variations. In other words, he maintains that a new species or variety is formed out of an old one by slow, yet continuous or incessant modifications of parts going on through innumerable generations. *Natura non fecit Saltum*—'Nature does not leap' is a favourite aphorism of Darwin. Thus, according to him, evolution is exceedingly slow.

Now, this Darwinian hypothesis of infinitely small modifications, accumulated by time and fixed by heredity, though still accepted by many, is gradually giving way to another hypothesis, *viz.*, that of sudden variations or mutations. According to this hypothesis, a new species comes into being out of an old one all at once by the appearance of several new characters. In other words, according to this theory, the actual transition from species to species takes place abruptly or suddenly, and not slowly by imperceptible degrees. This theory, worked out by Naudin, Bateson, and especially by Hugo De Vries, has been accepted by a large number of biologists at the present day. It is believed by them that an organism cannot undergo change in any one essential point without being reconstructed as a whole, and that a new variety arises by a sudden reconstruction and transition of the whole from one form to another. Thus, according to these thinkers, Nature *does* actually leap. This is the theory of development by *mutation*; otherwise called the theory of Saltatory Evolution or the theory of *Halmatogenesis* and *Heterogenesis*.

Which of these theories is the right one? Now, a number of facts affording corroboration of the Mutation Theory has been collected by its supporters. It is especially De Vries who brings forward, from his experiments and horticultural observation, comprehensive evidence of the mutational origin of new species from old ones by leaps and bounds. But the attitude of De Vries towards Darwin is conciliatory throughout. Indeed, we may say with Bergson that "perhaps both the theories are partly true." (*Creative Evolution*, p. 67).

But it is not necessary for us to take any definite side in this debate. It will be sufficient for us if it can be shown that each form of Evolutionism is quite consistent with, and, in fact, tends to support, Teleology. We have already shown that the Darwinian theory of Evolution by insensible modifications cannot dispense with Teleology. We may now show that the theory of sudden variations or mutations requires the principle still more imperiously. We may say with Dr. Rudolf Otto that "every one of its points yields to teleological considerations;

most obviously so the concrete fact of correlation. If any one were to make a theory of evolution decidedly from the teleological standpoint, he would probably construct one very similar to the one which we are now considering." (*Naturalism and Religion*, p. 171). Indeed, without Teleology, it is impossible to explain correlation of organs and the sudden reconstruction and transition of the whole from one form to another.

It should be borne in mind that Darwin was not altogether ignorant of the facts of sudden variation, but he looked upon them as 'sports of nature'—as 'monstrosities' incapable of perpetuating themselves. But many other biologists, many of whom were specialists in Botany, have regarded these as main factors in Biological evolution and have accordingly accepted the theory of mutation or saltatory evolution in a definite direction. Some facts supporting the theory are given below:

"One Seth Wright, the proprietor of a farm on the banks of the Charles River in Massachusetts, possessed a flock of fifteen ewes and a ram of the ordinary kind. In the year 1791, one of the ewes presented her owner with a male lamb, differing, for no assignable reason, from its parents by a proportionally long body and short, bandy legs whence it was unable to emulate its relatives in those sportive leaps over the neighbour's fences in which they were in the habit of indulging, much to the good farmer's vexation. . . .The variety appears to have arisen in full force, and, as it were, *per saltum*: a wide and definite difference appearing at once between the Ancon ram and the ordinary sheep. It is not possible to point out any obvious reason for the appearance of the variety—to use a conveniently erroneous phrase, the variation arose spontaneously. The Ancon ram was retained and used for breeding, and it is interesting to note that its offspring were either pure Ancons or pure ordinary sheep. The bandy-legged variety of sheep did not prove valuable, and has long ago become extinct, but the history of its origin is interesting.

"The oldest recorded mutation occurred in the rather common garden plant, the greater celandine. In 1590, an apothecary in Heidelberg had some plants of celandine growing in his garden, when there appeared amongst the ordinary specimens a peculiar new form, which had its leaves divided into very narrow lobes, and its petals also cut or laciniated. The cut-leaved celandine breeds true from seed and is now widely grown as a garden flower, but all the specimens are descended from the one original plant which arose unexpectedly as a 'sport.'

"The importance of mutations has been emphasised by Professor De Vries of Amsterdam, and he has made a special study of the subject. In the course of much experimental work he was fortunate enough to find a plant which was, as it were, producing mutations right and left. This was the plant known as Lamarck's Evening Primrose, which had been accidentally introduced into Holland from America. De Vries found the plant growing in a deserted potato-field in 1886, and the following year he discovered two peculiar forms, a smooth-leaved form and a type with a peculiarly short style. De Vries removed stocks of these different types to the botanical garden at Amsterdam, and there proceeded to grow enormous numbers of seedlings. Amongst these a large number of new mutations were found—a giant and a dwarf, a form with red-nerved leaves, another with very broad leaves, and several others. Altogether ten perfectly distinct new types were discovered, all but one of which bred true from seed. Some of these mutations were produced many times, others only very rarely.

"These examples will serve to show what we mean by the term *mutation*. We have given a few particular instances, but it must not be imagined that only a limited number of cases are known. A great number of mutations have been described and many of our varieties of cultivated plants and domestic animals have undoubtedly arisen in this way." (Watson).

IV. It has been said above that the chance of the production of new varieties out of old ones through fortuitous variation and Natural Selection has been mathematically shown to be extremely small by Mr. Alfred Bennet, a thoughtful writer. Let us see how he proceeds. He takes, as an example, a certain category of butterflies, called *Leptalis* whose colour is protective, because the colour makes them like other butterflies called *Ithomia* which the birds avoid for their tainted smell. Mr. Wallace, a distinguished follower of Darwin, attributes this advantage to Natural Selection. Mr. Bennet proceeds to examine his theory thus:—

"It is evident that to pass from their ordinary to their protective form the *Leptalis* must have undergone a series of gradual transformations; and we can hardly estimate at less than a thousand the number of forms that must have succeeded between the first deviation and the form at last observed. On the other hand, it is clear that the first degenerate *Leptalis* cannot have sufficiently differed from their sisters to deceive the appetite of the birds interested in recognizing them under their disguise, and it is a moderate supposition that, during the first fiftieth part of the period of supposed transformation, *i.e.*, through 20 generations, the birds were not deceived. If so, the butterflies not being yet preserved by their new dress, every reason of selection disappears, and we must regard as entirely left to chance the continuation of the metamorphosis. The chances which this has of being realised can then be very approximately calculated." The chance of first entrance of the operation of Natural Selection is thus computed by Bennet, after reducing 20 generations to ten, in order to give every admissible advantage to the theory, and to simplify the terms of calculation:

"Suppose there are twenty different ways in which a *Leptalis* may vary, one only of these being in the direction ultimately required. The chance of any individual producing a descendant which will take its place in the succeeding generation, varying in the required direction, is $\frac{1}{20}$; the chance of this operation being repeated in the same direction in the 2nd generation is $\frac{1}{20}^2=\frac{1}{400}$. The chance of this occurring for ten successive generations is $\frac{1}{20}^{10}$, or about one in ten billions. Now another factor comes into the calculation, and that is the number of individuals among which this chance is distributed. Mr. Bates and Mr. Wallace

agree in stating that, both in South America and in the Malay archipelago, the imitative species are always confined to a limited area, and are always very scarce compared with the imitated species. We will assume that the number of individuals of the imitative *Leptalis* existing at any one time is one million. The chance of there being among these million a single individual approaching the *Ithomia* to the extent of one-hundredth is $\frac{1000000}{10000000000000}$; or, the chance against it is ten millions to one." (A. W. Bennett).

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PART III.

PHILOSOPHY OF MIND OR SOUL.

CHAPTER XII.

INTRODUCTORY REMARKS.

§ 1. Fundamental Problems.

We have discussed above the fundamental problems of matter and life. We now proceed to study Philosophy of Mind which starts from the results of Empirical Psychology (otherwise called Phenomenology of Mind) and rises from it to Rational Psychology (otherwise called Ontology or Metaphysics of Mind). The following are some of the main problems discussed in Philosophy of Mind: What is the real character of mental substance, soul, ego, or spirit? How is soul related to matter and life? (This involves the question: What is the precise relation between mind and the physical organism or body?) What is the origin of consciousness which is the essence of mind? Does mind grow or develop as the body grows? If so, what are the conditions on which mental development depends? What is the relation between animal mind and rational mind? Has the latter grown out of the former by continuous development? Has there been a continuous mental development in the human race? What is the relation of the individual to the society to which he belongs? What is the true function of man as a factor of the world-system? What is meant by moral law and obligation? What is the nature of the power which enables us to discern moral laws and duties?* and so forth.

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* See p. 95. The last few problems come within the province of Ethics or Moral Philosophy. Here Philosophy of Mind becomes Moral Philosophy.

But before we proceed to discuss these problems, we must know the meanings of the terms *life, mind, consciousness, soul, self* &c. Hence—

§ 2. Explanation of the terms life, mind, soul self &c.

I. *Life.* The nature of life has been clearly explained before. (See Ch. IX). *Growth, assimilation, adaptation to circumstances, reproduction,* etc. constitute the distinctive characteristics of a being endowed with life. We may define life as the self-realising energy which realises itself by evolving the organism from within and making all its parts co-operate for the good of the whole. Thus life may be said to be both the *beginning* and the *end, resultant* or *product* of the organism. It is the beginning of the organism, because it is the power which evolves the organism from the germ in which it is immanent. It is the resultant of the organism, because the organism is the system of means by which it 'realises' itself, *i.e.*, completes or perfects itself, and makes itself a concrete reality.

II. *Mind.* Mind may be roughly defined as something which is aware or conscious of its states and processes. Thus consciousness is the essence or differentiating attribute of mind.*

The word 'mind', however, is used in three senses—

(*a*) It is sometimes used as a collective term for conscious states and processes—*i.e.*—for the states and processes of feeling, thinking and willing in their various forms viewed by themselves, and without any reference to an underlying substance or entity. In other words, it is sometimes employed to mean merely the aggregate, sum total or series of what are called psychical or mental phenomena. This is the *empirical* conception of mind.

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* Those that believe in the existence of subconscious mental states define mind as something which has consciousness or at least the potentiality of consciousness.

(*b*) It is also used for the substance, reality or entity which feels, thinks and wills, viewed apart from the processes of feeling, thinking and willing. In other words, it sometimes stands merely for the mental *substance* considered apart from the mental *phenomena, manifestations* or *expressions*. This is the *metaphysical* or *ontological* conception of mind.

(*c*) It is also used for the *concrete unity* of mental entity, substance or reality and its functions, processes or manifestations. In other words, it stands for the concrete reality constituted by the mental substance together with its conscious states and activities in which it manifests itself. This is the *philosophical* conception of mind.

It is easy to see that the last is the proper or adequate sense of the word 'mind'; for a substance apart from its states and activities is a mere abstraction without any real existence.

III. *Consciousness*. It has been remarked above that consciousness is the essence or differentiating attribute of mind. What, then, is meant by consciousness?

Now, strictly speaking, consciousness cannot be defined. We know that a logical definition must be *per genus et differentium* and must not contain any synonym of the term defined. But we cannot give any definition of consciousness which satisfies these conditions; for it is an ultimate and unique fact which cannot be brought under a higher genus or class; and every definition that we try to give becomes synonymous; *e.g.*, 'self's awareness of itself and its phenomena', 'the knowledge which a mind has of its own acts, ideas and feelings', and so forth. Consciousness is, in fact, *sui generis* (of its own kind), so that we cannot explain it by likening it to anything else. It can be understood only by being

directly experienced. We know what consciousness is, because we ourselves are conscious.

Nevertheless, as Dr. Stout remarks, confusion may arise if we pass the question by in this manner. If we cannot *logically define* consciousness, we should try to *describe* it as clearly as we can. Now, consciousness may be described in several ways. Thus, we may describe it (i) by using synonymous expressions, *e.g.*, mind's awareness of its own states; (ii) by enumerating its constituents, factors or elements, *viz.*, thinking, feeling and willing in their various forms, and pointing out that these are all states of consciousness, or that consciousness is their common feature; (iii) by contrasting a conscious being with what is believed to be unconscious—*e.g.*, a log of wood or a piece of stone; or, rather, by contrasting consciousness which is the essence, primary attribute or differentium of mind with the essence, primary attributes or distinguishing characteristics of non-mental material things, *viz.*, extension and impenetrability;[*] (iv) by showing that consciousness implies a relation between a subject and an object, *i.e.*, a knowing mind or self and something known. (See pp. 77, 78).[†]

IV. *Soul*. By the word 'soul' we mean the mental substance. It is that which manifests itself in the phenomena of conscious experience and gives unity and connection to them. It is the entity which exercises the mental powers—the one common and abiding subject which thinks, feels and wills. It is the spiritual reality which inhabits or occupies, animates and controls the material body, and which uses the body as the means of communication with the extra-organic world. It is otherwise called the spirit, essential self or ego. (See Ch. XVI).

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[*] Prof. Ladd describes consciousness by contrasting it with 'unconsciousness' in the following way:—"What we are when we are awake, as contrasted with what we are when we sink into a profound and perfectly dreamless sleep . . . . *that* is to be conscious. What we are less and less, as we sink gradually down into dreamless sleep, or as we swoon slowly away, and what we are more and more, as the noise of the crowd outside tardily arouses us from our after-dinner nap, or as we come out of the midnight darkness of the typhoid fever-crisis, *that* is consciousness." (*Psychology*, p. 30).

[†] It may be stated in this connection that an explicit and developed consciousness involves *self-consciousness—i.e.*, the self's consciousness of itself as the subject having the states and processes. A general account of this will be given in the sequel. For a full account, see Psychology.

CHAPTER XIII.

LIFE AND CONSCIOUSNESS.

§1. Nature and relation of Life and Consciousness.

We have considered above the nature of life and that of consciousness in a general way. We have found that growth from within or self-development by differentiation and integration of parts, assimilation of materials from without &c. are the distinctive features of a living organism, and that the power of life or 'vital power' is, so far as we can see, a self-realising power or energy which manifests itself in the organism as a whole, making all the parts co-operate as means for its preservation and development. We have also found that consciousness (or at least the potentiality of consciousness) is the differentiating attribute of mind or a mental being, and that, though we cannot logically define consciousness, we all know what consciousness is, because, as conscious beings, we experience it within ourselves.

But here a difficult question arises. What is the relation of life and consciousness? Are life and consciousness co-extensive? In other words, are all living beings conscious? We know that all plants and animals are living beings. Are we to suppose that they are all endowed with consciousness? It is usually supposed that only animals (including men) have life as well as consciousness, and that plants have life, but no consciousness. "The plant lives; the animal* lives and feels; man lives, feels and thinks." This is the popular view. Some thinkers, however, are of opinion that life is always accompanied by consciousness, and even plants have some degree of consciousness.

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* The word 'animal' has been used here in the sense of an animal lower than man; and it is often used in this sense, *e.g.*, we speak of *animal mind* as distinguished from *human mind*. But the word is sometimes used in a wider sense so as to include human beings.

What, then, is the extent of conscious life? The question is still an open one. The difficulty arises from the fact that we cannot observe the minds of others in the same way as we observe our own. We are directly aware of the conscious states and processes of our own minds; but we can know the existence of other minds and the conscious states and processes occurring in them only *indirectly* or *inferentially*—*i.e.*—by inference from their outward manifestations. We know that our own conscious states and processes—our various ideas, feelings, desires—are embodied and expressed in certain organic and extra-organic changes—in outward looks and gestures, sounds, movements, actions, products; and when we find the same or analogous expressions (or at least some of them) in other beings, we infer that those beings have minds and conscious states like our own. Thus it is only by this indirect method of analogy and inference that we know that our fellow-men and the lower animals are conscious beings; and if plants are endowed with consciousness, their conscious processes, too, must be known in the same way. The question, therefore, ultimately resolves itself into the following: Do we find in plants any external manifestations, expressions or signs of consciousness—any organic changes which would justify us in supposing that they have at least some degree of consciousness?

Now, the panpsychist who believes in the consciousness of plants argues in the following way: "In the case of man and the lower animals, we content ourselves with inferring analogous inner processes from the analogy of physical vital processes. Why not make the same inference here? For after all, a convincing proof cannot be given in the former

case either. A man cannot be forced by logic to grant the existence of psychical life to infusoria, worms, frogs and rabbits, if he regards the analogical conclusion as too uncertain. But if he admits this mode of inference without reserve in the latter case, and we all do it, there is no reason for excluding it in the case of plants. For plants manifestly show a far-reaching analogy with animals in visible vital processes; in nutrition, growth, cellular structure of elementary forms, reproduction by means of forms which separate from the parent organism. Development and death are common to both plants and animals. Language, too, universally speaks of life and death in plants as well as in animals. Why should there not be a correspondence between the visible and the invisible processes? To deny that there is, would, to say the least, require some proof... Does not the plant turn its buds and leaves to the light, does it not send its roots where it finds nourishment, and its tendrils where it finds support? Does it not close up its petals at night or when it rains, and does it not open them in sunshine? Do not many plant-germs move freely about in water, whereas animals in the first stages of embryonic development betray nothing of the power of free locomotion possessed by the developed animals?...The plant develops outwardly; it pushes to the surface; with its thousand leaves and buds it seeks the approach to light and air, while the trunk or stem lignifies on the inside or becomes hollow, and is preserved only in so far as it is needed for support." (Paulsen).

Shows, [illegible]

How, then, is life related to mind, of which consciousness is the essence? The different hypotheses that have been suggested are indicated below. They will be fully discussed in the sequel.

I. *Dualism*. According to this view, life and mind are two distinct substances, having no essential connection with each other. Life belongs to the physical organism or body, while mind is a spiritual substance, having consciousness for its differentium, introduced or located somehow in the body.

But this Dualistic theory cannot satisfactorily explain the intimate connection and constant inter-action of body and mind. Hence the theory of Occasional Cause, worked out by the Cartesians.

II. *Monistic theories.* According to these, life and mind are not two distinct substances. They are at bottom really one. Under this head we have to distinguish between materialistic and idealistic or spiritualistic monism:

(a) Materialism. According to this view, matter is the ultimate reality, and life and mind are its products or functions. It assumes that material atoms and forces operating blindly and fortuitously give rise to the complicated machine called the living organism, and mind is simply the series of conscious states brought about or elicited by the working of this machine (like flashes of light and heat).

But the above materialistic hypothesis is quite inadequate and unscientific. Science is constrained to admit that there is a wide gap or chasm between matter on one side and life and consciousness on the other. (See Chs. IX & X; also Ch. XIV).

(b) Monistic Idealism or Spiritualism. According to this view, life and mind are not two distinct substances; they are really one and the same. What is called the self-conscious, thinking or rational soul is only a more highly developed phase, stage or form of the same power that manifests itself as life, animating the body. According to this view, life in its lowest form is unconscious or, rather, sub-conscious.* At some point in its upward development, it begins to be accompanied by consciousness. In the lowest

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* Some Idealists suppose that life is always accompanied by some consciousness of its changing states. See pp. 184, 185.

phase of consciousness, there is no understanding of the realities—no explicit self-consciousness. It involves apparently a vague discrimination and feeling of the changing states as agreeable and disagreeable, blind craving and automatic self-preservation. In the highest form of finite consciousness, there is a clear consciousness of the self as distinguished from the not-self. At this stage the self becomes aware of its relations to other beings and of its own good and consciously attempts to realise it.

Thus, according to this view, life and conscious mind are not products of the physical forces working in the material body. The body is the system of means through which the 'vital' and 'mental' power realises and manifests itself. Indeed, this power which we designate as vital and mental is a finite reproduction of the ultimate power which evolves, animates and underlies the world-system as a whole.

whole

CHAPTER XIV.

RELATION BETWEEN MENTAL AND BODILY PROCESSES.

(THE PSYCHICAL AND THE PHYSIOLOGICAL SERIES).

Experience reveals to us that there is a close connection between mind and body. Our question here is: How are we to explain this intimate relation between the two? The different views held with regard to the relation of body and mind are indicated below.

I. *Dualism.*

The theory of Dualism assumes that mind and body are *two* distinct substances having *opposite* attributes or qualities. Mind is a substance having consciousness for its essential attribute. But the body is material, having for its essential attributes extension, mobility and impenetrability. Thus, each one of these has its own essential attribute and is without that of the other; so that mind and body have nothing in common beyond the mere fact of being substances or realities. This theory of Dualism was accepted by Descartes and his followers. It is also the common or popular view.

But if mind and matter, soul and body, be thus opposed and distinct, having nothing in common, how are we to explain the intimate relation between the two? How is it that changes in the one correspond to changes in the other? To answer this question the followers of Descartes started the *theory of Occasional Cause*. According to this theory (which was first suggested by Malebranche, a follower of Descartes), mind and body are opposed to each other and cannot possibly interact or act on each other; but still there is a correspondence; and the correspondence is brought about directly by God Himself. God is everywhere present and always active, and whenever changes arise in the body, He makes corresponding sensations arise in the mind; and when a desire to move the body and to produce changes in the outer world arises in the mind, He makes a corresponding movement arise in the body. We commonly suppose that the changes in the one cause changes in the other, but that is not true. The bodily 'affections' or changes are not the causes of mental ones (sensations and ideas), nor are the mental volitions the causes of the bodily movements. They are really the occasions on which God exercises His causal power to produce the requisite effects. In the words of Prof. Schwegler, "Every operation that combines the outer and the inner, the soul and the world, is neither an effect of the spirit, nor of the material world, but simply an immediate act of God. When I exercise my volition, it is not from my will, but from the will of God that the proposed bodily motions follow. On occasion of my will, God moves the body; on occasion of an affection of my body, God excites an idea in my mind. The one is but the occasional cause of the other." (*History of Philosophy*).

Criticism. But the above explanation is not very satisfactory. To say that a being interferes every moment and makes mind and body correspond to each other is simply to conceal the difficulty. The scientific mind cannot long remain satisfied with the theory which tries to explain the relation between mind and body by constant and direct divine interference. Hence other theories are suggested.

II. *Monism.*

According to this, mind and body are not two distinct substances; they are at bottom *one*. There are not two realities or substances as assumed by Dualism. There is *only one* substance, so that the duality of soul and body is only an appearance. The theory of Monism asserts that there is no difficulty in understanding the relation between mind and body, for they are ultimately but *one*.

This theory of Monism assumes three forms :—

(*a*) Materialism ; (*b*) Parallelism ; (*c*) Idealism.

These are separately considered below.

(*a*) *Materialism.*

According to this, matter as conceived by us is the only ultimate reality ; and what we call mind is only a product, modification or function of it. Mind is only a series of conscious states—"a stream of consciousness"—arising from the working of the material body. It is really a function or product of the organised matter of that part of the body which we call the brain. (See Ch. XXI, § 2 ; see also the author's *Principles of Ethics*, p. 109).

Criticism.

The theory of Materialism involves many difficulties. Without stating all the difficulties of Materialism viewed as a philosophical theory of the universe, we may simply indicate here the difficulties involved in the materialistic explanation of the relation of body and mind.

(i) The greatest difficulty of Materialism is to explain the origin of consciousness consistently with the results of science. The principle of Conservation of Energy as established by modern science simply implies that one form of physical energy can be transformed into another form of physical energy, and never into anything *non-physical*.

In other words, the principle asserts that where one form of physical energy disappears, it reappears in another form of physical energy without loss in quantity. How, then, can mental activity which is non-physical arise out of the transformation of the physical energy of the body and the brain ? Indeed, the various kinds of physical energy as known to science are only modes of motion, molecular and molar ; but consciousness is entirely different in kind from any mode of motion.

(ii) Again, if it be true that mental activity really arises through the transformation of the physical energy of the brain, then, during mental work, a portion of the physical energy of the brain should disappear and there should be a diminution of brain-activity. But it is a fact of experience that, during mental work, the physical activity of the brain is increased, and not decreased. In the face of this fact, how can we accept the materialistic view that mental activity arises through the transformation of the physical activity of the brain ? How, again, can the materialists explain the unity of self-consciousness consistently with their theory, seeing that the brain is composed of a plurality of parts ? Such questions as these cannot be answered by the materialists.

The above points have been fully explained by Kulpe in the following words : "Materialism stands in contradiction to the fundamental law of modern physical science—the law of conservation of energy. The law implies that the series of physical processes is a closed chain in which there is no place for a new kind of phenomena—the psychical or mental. * * How the effect of mentality can be produced without the least loss of energy upon the physical side is difficult to say."

The difficulty of explaining mind in terms of matter is so great that even Prof. Tyndall who is a materialist has to admit it. He says, "The passage from the physics of the brain to the corresponding facts of consciousness is unthinkable. * * The chasm between the two classes of phenomena will remain intellectually impassable."

(iii) There is also an epistemological difficulty involved in Materialism. Matter is known only in terms of mind. We know the qualities of matter only in terms of our sensations, and we can conceive matter as a substance only by extending to it the idea of substance which we get from our own minds. Therefore matter as conceived by us is, in a sense, a product of mind, and we should not use matter to explain mind. We should rather use mind to explain the existence and nature of matter. In fact, the materialist is guilty of committing the fallacy of vicious circle; he explains mind in terms of matter, and matter in terms of mind.

Thus we see that Materialism is not a satisfactory theory, and we have to consider other monistic theories.

(*b*) *Parallelism or Parallelistic Monism.* According to this theory which was first clearly explained by Spinoza, mind and matter are not two distinct substances; they are only two aspects of one and the same substance—of a single "double-faced" reality, so to speak. They are really like the concave and convex aspects of the same curve. There is one ultimate substance which has two fundamental attributes—consciousness and extension; and hence, in all the activities or modes of that ultimate substance, consciousness and extension appear. For every unit of extension in the universe, there is a unit of consciousness, and vice versa. Hence, corresponding to our body which is an aggregate of units of extension, there is our mind which is an aggregate of units of consciousness. Outwardly we appear as extended material bodies; inwardly we appear as conscious spirits. But body and mind are not distinct substances. They are essentially the same substance looked at from different points of view. Hence there is no difficulty in understanding the relation of body and mind, for they are at bottom one. Consciousness and extension are correlative aspects or attributes of the same substance. (The theory is called *Parallelism*,

because, according to it, mind and matter are *parallel* manifestations of the same reality).

Critical Remarks.

The theory of Parallelism is undoubtedly more satisfactory than the two previous theories, *viz.*, Dualism and Materialism, and it has accordingly been accepted by a host of modern scientific thinkers.* Dr. Paulsen, Wundt and Hoffding who are great thinkers look upon this theory as the most satisfactory one. Even Empirical thinkers like Bain, Spencer, and Huxley seem inclined to accept this view. Spencer, for instance, says that the one ultimate substance which is in itself unknown and unknowable manifests itself in two parallel series of phenomena, mental and material.†

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The theory has some advantages over Dualism and Materialism—*e.g.*, (i) it explains the correspondence between mind and matter (by showing that they are the correlative effects or parallel manifestations of one reality); (ii) it removes the difficulty of explaining the origin of mind, which is fatal to Materialism; (iii) it is consistent with the results of empirical investigation and explains the Law of Correlation or Concomitance as enunciated by Physiological Psychology, *viz.*, that for every state and process of mind there is a corresponding state and process of the organism.

But though the theory has some advantages and has been widely accepted, it is not altogether satisfactory. Human mind cannot long remain satisfied with a theory which places consciousness and extension, mind and matter, on the same level. It is extremely difficult to adhere to the theory

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* The theory of Parallelism or Parallelistic Monism, explained above, is otherwise called *Psycho-physical Monism*, *Panpsychism*, *Theory of a Double-faced Reality*, *Double-aspect Theory* and *Modified Dualism*.

† This statement, however, involves a contradiction. See p. 83.

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consistently and to look upon these two as merely parallel. Hence we find in History of Philosophy that the advocates of this view have wavered between Materialism and Idealism. Some have gone so far back as to fall into Materialism, others have moved forward to Idealism. In other words, some have looked upon matter as more fundamental, others have looked upon mind as more fundamental. Spencer, for instance, has almost fallen back into Materialism; for his theory of Naturalism which explains mind and life in terms of material phenomena is only Materialism in disguise. Paulsen and Hoffding, again, have fallen back into Idealistic Monism. Thus Paulsen says, "The substance is conceived under two attributes, extension and consciousness. This proposition is then modified by epistemological reflections to mean that the mental world is the true reality, the corporeal world, its phenomenon and representation in our sensibility". (*Introduction to Philosophy*, p. 232). Indeed, it is difficult to prevent Parallelism from becoming Idealism for the following reason: extended matter appears to be such only to mind, and is known only in terms of mind and through mind; mind, therefore, is more fundamental.

Now, since we find that mind and matter cannot be placed on the same level, and since Materialism which gives primacy to matter involves many difficulties, we have next to consider Idealism which gives primacy to mind.

(*c*) *Idealism*. According to Idealism*, mind is the ultimate reality, and matter is the product, expression or manifestation of mind. (It assumes that there is one absolute reality which is essentially mental and which realises itself as a concrete self-conscious power by evolving the universe and retaining it within its all-embracing unity. This mental power reproduces

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* By 'Idealism' we mean here Objective Idealism or Ideal-realism.

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itself as a finite self-conscious mind in and through the physical organism or body. Thus we see that the physical organism or body is vitally connected with mind; for the physical organism is the system of means through which a mental power makes itself a finite, individual, self-conscious being.)

This theory has several advantages over the previous theories, *viz.*, Dualism, Materialism and Parallelism. (i) Dualism assumes, as we have seen above, that mind and matter are distinct substances, and that the material body and mind have somehow been put together. It finds special difficulty in explaining the interaction of mind and the material body. But Idealism has no such difficulty, for matter is not altogether a distinct substance—it is only an expression of the mental activity of the Absolute. Thus Idealism fully solves the fundamental problem of Epistemology. How is it that mind and matter can act upon each other, though apparently distinct? How is knowledge of the material world possible? Because matter is the product of the Absolute mental power, finite mind, which is a reproduction or reduplication of the Absolute, can know matter and act upon it. This is the answer given by Idealism. (ii) Materialism, again, finds special difficulty in explaining the control of mind over the material body. If, as Materialism supposes, mind is an inessential and accidental product of the working of the material body, how is it that mind controls the body? But Idealism can easily explain the control of mind over body, for, according to it, the material body is only a system of means evolved and organised by a mental power. (iii) Finally, Idealism is superior to Parallelism, inasmuch as the former vindicates the primacy of mind over matter.

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Note 1. *Theory of Pre-established Harmony.* Something may be said in this connection about the theory of pre-established harmony which was maintained by Leibnitz and his followers in opposition to the Cartesian Theory of Occasional Cause. According to the Cartesian theory, God interferes every now and then, *i.e.*, whenever an occasion for interference arises. But according to the theory of pre-established harmony, God has established a harmonious correspondence between mind and body at the very beginning. God, who created minds and bodies, so constituted and adapted them at the outset that every change in the one should correspond to a change in the other—sensations and volitions in the mind to movements in the body—so that mind and body have correspondence with each other, although there is no causal connection between them—like two clocks set to the same time. A skilful mechanic may construct two clocks or watches in so perfect a manner that, when once set to the same time, they go on keeping the same time by the excellence of their internal mechanism, without requiring his constant intervention. Similarly, God, at the time of creation, established such a harmony between mind and body, that they always correspond to each other, without requiring His constant intervention.

We see, then, that "the theory of pre-established harmony differs from the occasionalistic system in an important point. The latter assumes a special divine intervention every time the soul and the physical organism are to agree. God regulates the soul by the body or the body by the volitions of the soul, as a watchmaker constantly regulates one clock by the other. According to Leibniz, the harmony between the movements of the body and the states of the soul is the effect of the Creator's perfect work, as the perpetual agreement between two well-constructed watches results from the skill of the mechanic who has constructed them. Those who assume that the Creator constantly intervenes in His work, regard God as an unskilful watchmaker, who cannot make a perfect machine, but must continually repair what he has made. Not only does God not intervene at every moment, but He never intervenes." (Weber, *History of Philosophy*, p. 354).

Note 2. *Panpsychism.* A few words may also be said in this connection about the theory of Panpsychism. According to this theory which is a logical consequence of Universal Parallelism, all existence is mental—the mental and material worlds are co-extensive. Spinoza, Fechner, Paulsen and Wundt are the well-known advocates of this view. Consistently with this view, we have to suppose that there is mental life everywhere. We are not to suppose that only men and animals have minds. There is mental life even in plants* and inorganic nature. Fechner goes so far as to suppose that the earth as a whole may have the unity of consciousness. The solar system itself may be pervaded by one comprehensive consciousness. He goes on to draw the conclusion that all consciousnesses, human and super-human, are included in one universal consciousness or God. According to him, wherever the processes of Nature attain a certain amount of organisation—*i.e.*,—co-ordination and systematic unity, explicit consciousness springs up. For every unit of extended matter in the universe, there is a unit of consciousness; and organisation consists in bringing the original units of matter into correlation with one another in such a way that the many units of consciousness accompanying them may

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* For the panpsychists' argument in favour of the consciousness of plants, see pp. 184-185. It will be interesting to note here that some ancient Indian Philosophers believed in the consciousness of plants. Manu, for instance, says, "अन्तःसंज्ञा भवन्त्येते सुखदुःखसमन्विताः", *i.e.*, These (plants) have inner experience or consciousness and feel pleasure and pain. Indeed, many Indian Idealists, believing in one universal conscious life immanent in the world, would have no objection to Panpsychism. It may be added here that some eminent scientists have accepted it, *e.g.*, Wundt, Naegeli, Zollner. Dr. J. C. Bose of this country, too, regards this view with favour. He has tried to show that, like animals, plants and metals are responsive to electric and other stimuli. It is still an open question, however, whether such responses do actually indicate the presence of conscious life.

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flow together in the form of one complex and explicit consciousness (as drops of water, when put together, actually flow). We have, therefore, no reason for supposing that there are no conscious or spiritual beings higher than man. There are probably higher spiritual beings who may be called 'gods'; and there is the highest spiritual being, *viz.*, the Absolute or God Himself—who may be called "God of all gods"—soul of all souls—self of all selves—the universal spirit or world-soul—including all consciousnesses—infra-human, human and super-human—within Himself. "The universe on this view is animated or spiritual both in its parts and as a whole, and the nature of Being is most reasonably to be conceived everywhere after the analogy of our own immediately experienced life. In this latter, feeling and appetency are more primordial elements than conception and reasoning, so it is fair to suppose that the inner life of the infra-human parts of the world is of a more appetitive or conative sort, whilst the Soul of the larger totals (the globe which we inhabit and the starry heaven itself), involving our rational souls, as it does, also knows all that our reason lets us know and much more besides."

It has been said above that Dr. Paulsen is one of the most distinguished supporters of Panpsychism. He argues in the following way:

(1) We know through inference that there are psychical, mental or conscious processes in other beings (See p. 184). The question is: How far may this inference be extended? The answer popularly given is this: As far as animal life extends. But is the animal kingdom separated from the rest of the corporeal world, specially from the vegetable kingdom, by a fixed boundary, as commonly supposed? Modern biology recognises no such sharp line of demarcation and proves that nature makes no leaps. Though the animal and vegetable kingdoms differ very greatly, yet they approach each other very closely on the lower stages of development. There are numerous lower forms of life which have the characteristics, neither of true animals nor of true plants. A separate group, the group of *protista*, has been formed for them, an intermediate class in which plant and animal characteristics meet. And if there is no sharp line between animal and plant worlds, and if it is assumed that animals do possess inner processes, nothing stands in the way of our admitting the psychical life of plants. So soul-life may extend over the entire organic kingdom. (See pp. 184-185).

(2) Again, likewise the organic and the inorganic bodies form, not two separate worlds, but a unitary whole in constant interaction. There is no difference in substance; the organic bodies are composed of the same ingredients of which inorganic bodies consist. The carbon, nitrogen, hydrogen and oxygen of which a plant or animal body consists are identical with the substances found in inorganic constructions.

(3) Indeed, modern biology has proved that 'organic life had a beginning on earth', and that the first organisms arose out of inorganic elements through parentless generation. Physical cosmology lends support to this view. To avoid an absurdity, *viz.*, 'creation out of nothing', it must be said that 'an inner life was already present' in the so-called inorganic particles and that it developed into higher forms.

(4) We cannot conceive the presence of life in matter, simply because we have already formed an arbitrary conception of it which is far from representing reality. Having once defined matter as dead and inert substance, determined from without through impact and pressure, we naturally find it inconceivable that it should possess any inner life of its own. But the facts supplied by modern science do not compel us to form such a concept of matter. It is becoming more and more probable that, corresponding to the wonderful play of physical forces and movements, there is a system of inner processes, analogous to that which accompanies the working of the parts in the organic body.

(5) Again, there may be a more comprehensive psychical life than that which we experience, as there is a lower one. Our body, we know, is itself a part and parcel, however insigni-

ficant it may be, of the universe. Cannot our psychical life be similarly a part and parcel of a more comprehensive system of consciousness—a *cosmic consciousness* which may pervade the whole universe?

The theory of panpsychism has not been accepted by all modern thinkers. Dr. Marvin, for instance, though an admirer of Paulsen, does not accept panpsychism. He admits that there is some analogy between the physical processes of nature and the physical processes of the body; but he says that from this it cannot be inferred that, corresponding to the physical processes of nature, there are inner psychical lives. To quote his own words, "Any analogy will not do. The analogous property must be necessarily related to the property at issue." "This pole is like this man, this man walks, therefore this pole walks. Can we say this? Certainly not." He concludes by saying that at the present state of our knowledge panpyschism must be left as an open question and that it is a problem for science rather than for metaphysics. Let science of the future answer the question.*

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* Dr. Marvin admits with Fechner, Dr. Paulsen and other Idealistic thinkers that the whole universe is pervaded by one universal consciousness. But he rejects the panpsychistic view that matter has an inner psychical life. It should be borne in mind that Panpsychism involves *hylozoism* by which is meant the assumption that matter is alive. (*Hyle*=matter, *Zoon*=a living being). It may be added here that Prof. William James favours Panpsychism. For an account of his view, see Note on Pluralism in Philosophy of God.

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CHAPTER XV.

MENTAL EVOLUTION OR DEVELOPMENT.

§ 1. Questions involved.

The question to be discussed in this chapter is: Does the principle of evolution or development apply to mind? Is mental evolution an established fact?

Now, the question of mental evolution involves three subordinate questions:—

I. The question of development of the individual mind.

II. The question of mental development in the human race.

III. The question of mental development in the animal kingdom as a whole.

These are to be considered separately.

§ 2. Development of mind in the individual.

The question how the mind of every individual is gradually developed from birth to maturity is psychological and is fully discussed in every treatise on Psychology. We may here simply indicate the general conditions which determine the development of every individual mind.

Now, it is a fact of experience that the mind of every individual develops by a differentiation and integration of powers or capacities from within. There is a considerable difference between the mind of an infant and that of a full-grown adult. But the difference between the two is one of degree only. The child becomes a full-grown adult mentally and physically by passing through a continuous process of psycho-physical development. As the body of an individual is gradually developed, so is his mind.

We have, therefore, to consider the general conditions and forces which co-operate as factors in bringing about the development of the individual mind. The conditions fall under two heads, (*a*) internal and (*b*) external.

(*a*) The internal conditions include certain fundamental mental capabilities and peculiarities with which the individual is born and also the tendencies or dispositions inherited by him from his ancestors. It is a well-known fact that certain tendencies or dispositions to think, feel and act in particular ways are inherited from the ancestors by every individual along with certain peculiarities of the nervous structure.

(*b*) External conditions. These include : (1) The influence of physical environment, and (2) the influence of social environment. By physical environment we mean the natural surroundings—the outward circumstances in the midst of which the individual is born and brought up. These act on the physical organism, and, through it, on the mind, and thus determine (to some extent at least) the mental development of the individual. The influence of social environment is a more important condition. Now, social influence may be (i) designed or (ii) undesigned. As an example of the former we may take the influence of training and moral and legal control; as an example of the latter we may take the silent influence of example. (See Ch. XVII, *Individual and Society*).

§ 3. Mental development in the human race.

We have next to consider briefly the question of the development of mind in the human race from the earliest condition down to the present. The details belong to Anthropology and Sociology. It is now generally believed that there is such a thing as mental evolution of the race, just as there is mental evolution of the individual. It is supposed now-a-days that the civilised races were not created all on a sudden by God Almighty. History tells us that at a very remote period even the races which are now the most enlightened lived in very low intellectual and moral conditions and have attained their present condition through a process of continuous development. The refined manners and customs, the enlightened forms of Government, the higher religious conceptions that we find to be prevalent among the civilised races are the accumulated results of a long process of evolution. Thus we find that the civilisation of the day has been brought about in the course of ages. It may be stated in this connection that there has been sufficient mental development only in some branches of the human race, such as the advanced Aryan, Semitic and Mongolian races. There are savage tribes even at the present day, *e.g.*, the Fuegians and the African Bushmen. The conditions of the development of a race are three :—(1) the natural genius of the race; (2) the influence of physical environment; (3) intercourse with civilised races. Let us consider them separately.

(1) *Natural genius or capabilities of the race.* This must be admitted, for we sometimes find that one race becomes more civilised than another, though other conditions are the same. Thus, in India the Aryan Hindus and the Non-Aryan aboriginal tribes have lived side by side for ages, under the same physical conditions, yet the Hindus attained very early a high degree of civilisation, while most of the aboriginal tribes have remained in a backward or less developed condition down to the present day.* Again,

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* It should be remembered that all the aboriginal tribes of India are not equally uncivilised; some are more polished and progressive than others. It is believed now-a-days that some of the Non-Aryan Dravidian tribes had a civilisation of their own before the advent of the Aryans. Indeed, it is probable that the later Hindu civilisation was the result of the fusion of Aryan and Dravidian cultures. A full discussion of this problem lies beyond the scope of the present treatise.

the Non-Aryan races that inhabited Europe and America before the arrival of the Aryans did not advance in mental power, while the Aryans have made remarkable progress.*

(2) *Influence of physical environment.*

It is a well-known fact that the civilisation of a people is affected to some extent at least by the physical environment which includes the climate, soil and products of the country, and the character and abundance or scarcity of the means of sustenance. These conditions influence mental development in the following ways:—(i) they call forth some latent or potential capacities of mind and suppress others; (ii) they promote or hinder directly the development of the body and thereby indirectly that of mind. Thus it is generally believed that the mental characteristics of the Negroes, the Esquimaux, and the different races of India and Europe have been determined to some extent by the natural or physical influences to which these peoples have been exposed for ages.†

(3) *Intercourse with civilised races.* It cannot be denied that this is an important condition and promotes the civilisation of a people. A glance at the Japanese civilisation will make it clear. In former times, the civilisation of the Japanese was greatly influenced by the civilisations of China and India; and the remarkable progress made by them in recent years is due mainly to intercourse with the enlightened races of Europe and America.‡

It has been supposed by some writers (*e.g.*, Archbishop Whately) that man came into the world as a civilised being and that the savages of the present day are the degraded descendants of civilised human beings. In other words, it has been supposed by them that the earliest human beings were highly civilised and that some branches of the human race have degenerated, while others have remained civilised. But there is hardly any evidence in favour of this view. It is true that some ancient civilised nations have fallen away in civilisation to some extent, but there is no evidence that any nation has lapsed into utter barbarism. On the other hand, there is abundant evidence that all civilised nations were once barbarous or at least far less advanced than what they are now. "The evidence that the modern civilised nations are the descendants of barbarians consists, on the one side, of clear traces of their former low condition in still existing customs, beliefs, languages, &c.; and, on the other side, of proofs that savages are independently able to raise themselves a few steps in the scale of civilisation, and have actually thus risen."

§ 4. Mental evolution in the animal kingdom as a whole : Nature and Origin of Reason.

Finally, we have to consider the question whether there has been one continuous development of mind in the animal kingdom, from the most elementary forms of consciousness present in the lowest species of animals up to the highest form of rational life found in the enlightened races of mankind. This problem of the continuity of mental development in the animal world involves that of the relation of animal mind to rational mind. The question arises: Has the rational mind of man grown, by slow yet continuous modifications, out of the lower forms of animal mind? Darwin in his well-known treatise entitled "Descent of Man" tries to show that the physical organism as well as the rational mind of man have arisen by a continuous process of development out of the physical organism and mental life of the lowest species of animals. But this theory has not been accepted even by all evolutionists. Some say that the physical organism of man has developed by continuous modifications out of the organisms of lower animals; but they maintain that the rational mind of man is entirely different in kind from the minds of lower animals, so that there has been no transition from animal mind to rational mind.*

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* Some of the native tribes of America (*e.g.*, the Mexicans and the Peruvians) had already made considerable progress when first visited by the Europeans.

† See Pritchard's 'Physical History of Mankind' and Buckle's 'History of Human Civilisation'. Read also the Bengali treatise 'গ্রীক ও হিন্দু by the late Babu Praphulla Chandra Banerji.

‡ It may be pointed out in this connection that contact with civilised races is sometimes highly injurious to savages. Such contact sometimes leads to their gradual decrease and ultimate extinction, even if they are well treated by the civilised immigrants. "The breath of civilisation seems to be poisonous to them." The truth of this remark will be evident if we consider the condition of the Maories of New Zealand, the natives of Sandwich Island and some other barbarous tribes. The causes of this phenomenon are highly complex and partly obscure. "The most potent of all the causes of extinction appears in many cases to be lessened fertility and ill health especially amongst the children, arising from changed conditions of life, notwithstanding that the new conditions may not be injurious in themselves." (Darwin's *Descent of Man*).

How, then, are we to answer the question stated above? Are we to suppose, with the Darwinians, that the rational human mind, as it is at present, has been derived by a continuous process of development from such mind as we see in lower animals? To answer this question we have to consider the *nature of reason*; for we know that reason or rationality is the differentiating attribute of human mind. What, then, is the nature of reason? Reason means intelligence—the entire group of intellectual faculties from perception, internal and external, to conception and reasoning or inference. It thus includes (1) the power of understanding the self as a reality having the

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* Even Mr. Wallace who is an advocate of the theory of biological evolution as propounded by Darwin asserts that the higher faculties of man develop under higher laws and that the theory of evolution, rightly understood, "lends a decided support to a belief in the spiritual nature of man."

conscious states and processes; (2) the power of understanding the external world as the ground of the sensations; (3) the power of 'looking before and after,' *i.e.*, remembering the past and anticipating the future and thus the power of adaptation to new circumstances; and (4) the power of judging what is good or desirable for the self and regulating the actions so as to realise what is good. In other words, reason includes, among other elements, the powers of fore-seeing, judging, self-adapting and co-ordinating. But to say that reason involves so much is equivalent to saying that it includes the power of elaboration or logical thought, *i.e.*, the power of forming concepts out of the materials supplied by perceptions and using them as means of advancing knowledge from the sphere of the known to what was hitherto unknown, *i.e.*, the power of extending knowledge from the present to what is past, distant and future.

Now, it is generally admitted that lower animals do not possess reason in the above sense. Their actions are reflex, instinctive and spontaneous ones which are apparently non-rational. Hence the question to be discussed by us is essentially this: Is there any possibility of transition from the non-rational, random or spontaneous, reflex, and instinctive activities (as found in lower animals) to the rational, regulated, deliberate, intentional activities as displayed by men? In other words, can it be shown, with scientific accuracy, that non-rational actions such as have been mentioned above can rise, by an unbroken process of development, into rational actions? Does the higher and rational form of conduct or action arise out of the lower forms by a continuous process of development, so that there is nothing in the higher that was not present in a simpler and implicit form in the lower, and rational action is only a more complex and refined form of automatic action, spontaneous, reflex or instinctive? We should, therefore, consider briefly the nature of each of the above forms of non-rational action and see whether any of them can be developed into rational conduct.

(i) *Reflex action.* A reflex action means automatic response to sensory stimulation from outside. Now, when such reflex actions are repeated, they tend to become more automatic or mechanical. Thus, there can be no passage from reflex actions to voluntary or rational ones.

(ii) *Instinctive action.*

An instinct is an untaught aptitude beneficial to the individual and the species. An instinctive act is a marvellous adjustment or adaptation of means to some unforeseen or unanticipated, definite end. As Prof. Dewey says, it is "one to which the individual feels himself impelled without knowing the end to be accomplished, yet with ability to select the proper means for its attainment.") Instinctive tendencies are found most explicitly in lower animals and are specially expressed in the activities displayed by them in seeking food, in self-defence and attack of enemies, in the construction of dwellings, in making provision for the young, &c. Though instinctive tendencies are not wanting in man, yet in him they are concealed or transformed by reason to a great extent. In human life spontaneous, reflex and instinctive tendencies predominate at the beginning.

Now, is there any possibility of transition, or any passage from instinct to reason?* There seems to be no passage from instinct to reason or intelligence, for instinctive actions are complete and sufficient in themselves for the wants of the creature and leave

no room for further development. Indeed, instinct and reason or intelligence seem to be quite opposed to each other; for instinct adapts a creature to a particular set of circumstances; the creature becomes quite helpless, if any change is made in the circumstances. But reason means the power of adapting oneself to new circumstances—the power of learning new things and of judging what is desirable under the peculiar circumstances and devising means for its attainment. The view that instinct is not gradually developed into reason appears to be proved by the fact that the creatures in which instinct is most highly developed are the lowest in reason or the power of learning new things and maintaining themselves under new circumstances.

(iii) Finally, we should consider whether rational conduct can grow out of spontaneous or random action. Some thinkers hold that this is possible.

Thus, it is argued by Dr. Bain and his followers that when a spontaneous action gives rise by chance to a consequence which is beneficial and pleasurable to the creature, an association necessarily takes place between the traces left by the action and the result; and thus, through the revival of the pleasurable result in idea, a revival of the idea of the action itself takes place in the mind by force of association, and the action is spontaneously repeated, leading to a similar pleasurable consequence. Suppose A is a spontaneous

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* "Some think that instinct rises gradually into reason and point to such creatures as the beaver, the dog and the elephant as not only highly endowed with instincts, but as examples at the same time of instinct rising into reason. Others think that instinct and reason are opposed to each other, being in fact movements in opposite directions, so that there is no possible passage from the one to the other. Indeed, the creatures most highly endowed with instincts properly so called are insects, and these, as experiment shows, are very low in intelligence or power of adapting themselves to new circumstances. Instinct, when perfect, is complete in itself; it makes the creature's powers to be exactly fitted to all ordinary needs, so that it has no motive to acquire anything more; and the unvarying character of instinctive actions makes it impossible to do so. Instinct is like a 'blind alley' with entry at one end, but no exit at the other. There seems, therefore, to be no passage from instinct to reason." (*Analytical Psychology*, by Prof. H. Stephen, third edition, p. 505).

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action leading by chance to the pleasurable consequence X. These will leave traces or vestiges of themselves in the mind, which will be associated with each other and be capable of being revived as ideas. Let these traces be called *a* and *x*. Now, if somehow, *x* (the trace of the pleasurable consequence X) is revived in idea, it will revive *a* (the idea of the action A) by the force of association; and thus the action A will be repeated, producing actually X, the pleasurable consequence. Here, then, we find the beginning or germ of voluntary or rational action—the first step, so to speak, in its growth; for we find here that the idea of an end or consequence (*x*) suggests the idea (*a*) of an action (A) necessary for its own realisation.

But this is not all. In the course of experience many spontaneous acts will be performed, and these will lead to pleasurable or painful consequences. Thus, as experience advances, the mind will be filled with ideas of pleasurable and painful consequences; and the result will be that there will be something like conflict of impulses or desires. Herein we find the beginning of deliberation, reflection or judgment which is an essential element in the rational conduct of man.

Criticism. It is easy to see that the supporters of the above theory introduce reason surreptitiously instead of explaining its origin—they tacitly assume reason as already existent instead of showing, with scientific precision, how rational conduct can arise out of non-rational, spontaneous action. A mere passive accumulation and association of sensations and ideas cannot originate that power of active interpretation, judgment, anticipation and self-adaptation in which reason consists. Development of reason presupposes the previous existence of reason in an implicit or potential form.

Concluding Remarks. It appears from the above that reason marks a new beginning. How, then, are

we to explain the origin of reason? Are we to fall back on the theory of special creation? Or, can we explain the origin of reason consistently with the theory of evolution in some form? What, again, is the origin of instinct? In reply to such questions it may be said that it is not necessary for us to return to the theory of special creation. We have already accepted the theory of teleological evolution (see pp. 130-149); and it is possible to explain the origin of instinct and reason most adequately with this theory.

According to it, there is one Universal Reason—one immanent mental power—which guides the course of evolution and gives all beings their existence and mutual relation. It is this Universal Reason which brings about the extremely complex adaptations of means to results which constitute Nature, organic and inorganic. It is this power which organises the physical structures of living beings, makes animals perform their instinctive actions for their self-preservation and the preservation of their species, and reproduces itself finitely in the reason of man.*

Thus, according to this view, there has been an evolution of rational mind, though that evolution has been guided by a supreme mental power. But this view does not necessarily imply that rational mind

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* Prof. H. Stephen distinguishes clearly between the operation of reason in Nature and that in man in the following words:

"Reason operates indeed in physical nature, in organic development and life, and in instinct; but physical processes, plants and animals are not conscious of the reason working in them and determining their actions. This reason does not belong to them; they know nothing about it; they are only its instruments. In man, on the contrary, the reason which regulates his actions is *his own*............In him the reason which operates in nature becomes individualised or reproduced, and he is conscious of it as the essence of his own self. He is a finite reproduction of the Absolute." (*Problems of Metaphysic*, fifth edition, p. 269).

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has arisen out of non-rational animal mind by a continuous process of development or modification. We may quite reasonably suppose that the evolution of rational mind is an instance of what is called 'saltatory evolution or development by mutation'—*i.e.*, evolution by sudden variation and transition from one stage to another. (See pp. 173-176, Note on Biological Evolution). As Dr. H. Stephen very aptly remarks, "This view makes it easier to understand that the appearance of reason may be a new and even sudden beginning so far as individual minds are concerned—a turning aside of the evolving activity into a new channel and new direction." (*Problems of Metaphysic*, fifth edition, p. 270).

CHAPTER XVI.

See Cunningham's Principles of Philosophy.

NATURE OF SOUL : EMPIRICAL AND NOUMENAL SELF.

§ 1. Meaning of soul and self. Nature of self-consciousness.

By the word 'soul' we mean the mental substance, entity or reality which underlies and unifies the phenomena of consciousness and manifests itself in them—which animates the physical organism and uses it as the means of communicating with the external world. The essential reality which underlies and connects together all the successive states and processes of conscious life is otherwise called the *self*, *ego* or *spirit*. (See p. 182).

The principal hypotheses as to the relation of soul and body have already been indicated. (See Ch. XIV).

It should be borne in mind that an explicit, normal and fully developed consciousness* involves *self-consciousness*. By this is meant the self's awareness of itself as the one abiding subject which has the successive states and processes of consciousness. It is a fact of experience that, in thinking, feeling and willing, we are conscious of *ourselves* as thinking, feeling and willing; we are conscious of the successive states as *our own*. We have the irresistible consciousness or conviction that it is *we* who are thinking, feeling and willing; and when remembering our past experiences, we recognise them as *our own* and *ourselves* as having been the subjects of them in the past.

It is easy to see that self-consciousness as explained above includes a consciousness of *personal*

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* In such a consciousness, the element of self-consciousness is always present more or less. It may be faint in degree, but it can never be altogether absent.

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identity. In remembering its past states and processes, the self knows itself as having experienced them in the past. It thus becomes aware of its own permanence, continuity, identity or unity in the midst of change and diversity—it knows itself as one and the same individual or person experiencing many states.

Thus the self recognises itself in its own consciousness as one and the same individual or person manifesting itself in a connected system of states and activities in time; and the philosophical importance of self-consciousness consists in this that it is the source of the ideas of substantiality and causality; for, as pointed out above, in self-consciousness the self is clearly and directly or intuitively aware of itself as *one abiding or persisting agent*. (See p. 60 and p. 64). It may also be added in this connection that in self-consciousness empirical knowledge and metaphysical knowledge meet and coincide; for here we are at once and most directly conscious of a reality and its manifestation.

§ 2. Different uses of the word 'self'.

We have given above the most adequate sense of the word 'self'. But this word has been used in several different senses. It is necessary, therefore, to consider briefly the different uses of it.

(a) *Noumenal self.*

By the expression 'noumenal self' is meant the essential mental reality or substance (otherwise called the *ego*, *soul* or *spirit*) which is the unifying principle of the different conscious states and activities—the one abiding subject which thinks, feels and wills. The correctness of this conception of self or ego cannot be denied; for the states and processes of consciousness are but empty abstractions apart from the reality underlying and supporting them and manifesting itself through them. It must be borne in mind, however, that the concrete reality called the

self or ego is constituted by the mental substance or conscious subject together with the conscious states and processes.

(*b*) *Empirical self* or *self as phenomenal*. By this is meant the aggregate, sum total or series of what are called the *mental* or *psychical phenomena* or *experiences*—*i.e.*—the conscious states and processes of thinking, feeling and willing in their various forms, viewed apart from the substance, reality or subject which has or experiences them. The states and processes of consciousness are said to constitute the empirical constituents or phenomena of the self, because these alone enter into *experience*—*i.e.*—can be observed and (to some extent at least) experimented upon, and it is only in and through them that the self manifests itself to itself.*

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* It is generally admitted by modern Psychologists (whether they are empiricists or not) that Psychology as the *science* of mind should be *purely empirical or experiential*—*i.e.*—be a study of the *empirical* or *phenomenal self only*, as distinguished from the noumenal self. In other words, according to them, Psychology should deal *only* with mental *phenomena* or states and processes of consciousness and aim at ascertaining their composition, relations, conditions and laws, without at all taking into account the subject or reality which has them. Sciences, they say, should treat of phenomena or facts of experience only and keep clear of Ontology or Metaphysics which deals with the realities; and if Psychology be a *science*, it must avoid all reference to self as a reality.

But this is an exaggeration. It is true, no doubt, that Psychology as the science of mind is essentially an enquiry into the composition, connection and laws of conscious experiences or mental phenomena; but still it canot be made *wholly* empirical; for it is impossible to explain the relations of conscious states and the unity of the conscious life as a whole, if all reference to self as a reality be dropped. Indeed, the reality of the self is a fact of inner experience; for all explicit consciousness or experience involves a consciousness of the self as the experiencing subject or reality. (See pp. 213-214).

And it may be safely asserted that Psychology is not wholly on the same line and level with the natural sciences, for natural phenomena which constitute the subject-matter of the natural sciences are known only in terms of or through the medium of consciousness which constitutes the subject-matter of Psychology.

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(c) *Individual self and social self.*

The word 'individual' literally means "not divisible"—"a reality which cannot be divided." Hence it has come to mean "anything subsisting as one"—"a single being or reality." By the expression "an individual self" we mean "a self or ego existing and recognising itself as a single individual reality or personal being and distinguishing itself from other beings". Every personal being is aware of himself as a single individual, as an abiding reality existing and manifesting himself continuously through a long series of conscious states and processes—ideas, feelings and volitions; and he clearly distinguishes himself from other personal beings, because his feelings, ideas &c. are peculiarly *his own*, and other persons cannot directly feel his feelings or think his thoughts as he himself feels or thinks them. His self, therefore, may be said to be an 'individual self.'

The expression 'social self' is figurative. All persons with whom we have feelings and interests in common—all included within the range of our sympathy—may be said to constitute our *social self* as distinguished from our individual self.

§ 3. Empirical conception of self carried to an extreme. (Sceptical theory of mind).

We have distinguished above between the 'empirical self' and the 'noumenal self', or rather between the empirical or phenomenal and noumenal or substantial aspects of the self, for self as a concrete reality is constituted by both. But there are certain thinkers known as extreme empiricists, sceptics and agnostics who maintain that the above distinction is neither reasonable nor necessary and that the so-called empirical self is really the whole of the self as known to us. In other words, according to them, mind or self is simply a series or succession of conscious states and processes which exist by

themselves and require nothing else, no substance to support, unify and co-ordinate them. The so-called self or ego is neither simple nor identical, but merely an ever-changing series, a complex collection of conscious states or experiences. This theory is called the doctrine of *Psychological Atomism*, because, according to it, the relation of the units of consciousness to the whole self is much the same as the relation of material atoms to the material universe. As the material world is built up by, or is an aggregate of, material atoms connected together by the force of gravitation and other cohesive forces, so the self or the psychical world is built up by, or is an aggregate of, units of consciousness (sensations and ideas) connected together by the forces of association. We speak, indeed, of the self as something which experiences or has the different states of consciousness; but the more correct statement would be that the self *is* the different states themselves. We know nothing of any essential self, not even its existence; all that we know are the conscious states themselves, and it is they that constitute the self (if the word 'self' has any meaning). Take away the conscious states, and nothing is left. There is no consciousness of the substance of mind as something distinct from the states. The existence of an abiding, pure, substantial self is only a figment of imagination—a fiction of Metaphysics. It is only an abstract idea, fallaciously substantialised.

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This is the sum and substance of the sceptical theory of self as propounded by Hume, Mill and their followers.* The same sceptical view seems to underlie the psychological system of W. James, a well-known modern psychologist and philosopher. According to him, "mind or self is a stream of consciousness."*

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* "No man is anything more than a collection of different perceptions which succeed each other with inconceivable rapidity and are in perpetual flux and movement......If any one, upon careful and unprejudiced reflection, thinks he has a different notion of *himself*, I must confess I can reason no longer with him." (Hume, *Human Nature*).

Mind is "nothing but the series of sensations and internal feelings as they actually occur, with the addition of *possibilities* of feeling." (Mill, *Examination of Hamilton*, Ch. XII).

Criticism.

(i) The most serious charge against the sceptical, agnostic or sensationistic theory of self is that it involves the fallacy of substantialising abstractions. Having abolished every other substance, the sceptics make the states themselves to be substances; but it is easy to see that the states and processes apart from the reality which has them are empty abstractions. We cannot at all think of feeling without assuming something that feels, nor of thinking and willing without assuming something that thinks and wills, nor of the sensations as such without the ideas of a sensitive mind as their subject and the objective world as their ground. Nevertheless, the sceptics or the extreme empiricists speak of the mental states as if they were themselves substances. Thus, J. S. Mill speaks of one mental state as knowing another. He speaks of "a series of feelings as being aware of itself as a series, and as past and future." Prof. William James says, again, that "the thoughts themselves are the thinkers", and so on. But a statement of this kind is simply an abuse of words. How can one feeling or idea know itself and other feelings or ideas and its relation to them? How can one state understand itself as *before* or *after* another? How can a series of separate states know itself as a series—*i.e.*—as a whole and the separate states included in it? The relations of the states can be understood only by a thinking principle which is present in all the states, and is therefore able to think them all in their

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* "The consciousness of self involves a stream of thought, each part of which as 'I' can remember those which went before, know the things they know, and care paramountly for certain ones among them as 'me' and *appropriate to these* the rest......The provisional hypothesis which we have accepted here must be the final word; the thoughts themselves are the thinkers." (W. James, *Text-book of Psychology*, pp. 215-216).

relations to one another. Indeed, on the empirical hypothesis, memory of the past and anticipation of the future become wholly inexplicable.

(ii) The empirical theory ignores the evidence of self-consciousness or inner experience. The self is clearly conscious of itself as a 'unity in plurality.' It is directly aware of itself as a single abiding subject which thinks, feels and wills—as something which undergoes and experiences changes of state and endures through them all. Thus the unity, reality and personal identity of the self must be viewed as a fact of experience; yet, strangely enough, the sceptical theory, while pretending to be 'experiential', ignores this.

(iii) The empirical theory in its extreme form makes knowledge impossible; for knowledge as understood by us implies not only the existence of conscious states, but also a subject which experiences the states and the objective things revealed by them. Indeed, if we know nothing of any reality, but only sensations, feelings and ideas, how is it possible to distinguish mind and matter? Let us examine the view of J. S. Mill, one of the most distinguished champions of this theory. According to him, matter is the permanent possibility of sensations, and mind is the series of conscious states (sensations, feelings, ideas). But the series, he admits, is not continuous. It is often interrupted by periods of unconsciousness—*e.g.*, the time of sleep. Does mind, then, cease to exist in the interval? No, says he; it may be said still to exist as a continuous 'possibility' of conscious experiences (sensations and feelings). We here reach the core of the system. Matter is a continuous possibility of sensations, and mind is a continuous series and possibility of sensations and other states. Thus we get two 'possibilities.' How, then, are mind and matter to be distinguished? Surely, then, the whole subject of knowledge ends in confusion here. Mill maintains the semblance of consistency only by tacitly assuming 'the common sense view' of mind and matter. (See p. 60).

(iv) The weakness of the empirical theory is so obvious that even J. S. Mill is constrained to admit it. There is something paradoxical, he says, in the supposition that a series of separate conscious states can know itself as a series—*i.e.*—as a whole. Here is a passage from Mill's 'Examination of Hamilton's Philosophy': "If we speak of the mind as a series of feelings, we are obliged to complete the statement by calling it a series of feelings which is aware of itself as past and future; and we are reduced to the alternative of believing that the mind or ego is something different from any series of feelings or of possibilities of them, or of accepting the paradox, that something which, *ex hypothesi*, is but a series of feelings can be aware of itself as a series." (pp. 212, 213). But though Mill acknowledges the paradoxical character of the empirical conception of mind, yet, as a consistent empiricist, he accepts it. Nevertheless, everywhere he tacitly assumes the substantiality of mind—that is to say, the view that mind, self or ego is something which *has* the feelings. In one place he declares that sensations and ideas involve "*belief* in something more than their own existence." Elsewhere he says that "there is a bond of some sort among all the parts of the series which makes us say that they were the feelings of the same person throughout, and this bond to me constitutes my ego." But this is virtually equivalent to admitting all that is claimed by us as revealed in our self-consciousness.

§ 4. Nature of human soul. Concluding Remarks.

We have examined above the different theories of self. It is necessary now to put together the results of our enquiry. Now, with regard to mental substance, soul, self or ego, two questions may be considered :—

(i) What and how much does consciousness *directly reveal* regarding the nature of the self? In

other words, what are we directly aware of about our self?

(ii) What can we know *indirectly* or *inferentially* regarding it?

I. Nature of soul or self *as directly revealed in consciousness*. The self is clearly conscious of itself as a 'unity in plurality'—as a *single* individual manifesting itself in a *plurality* of states and activities—as one and the same being, of which the past as well as the present states and activities are functions. In other words, the self is aware of itself as a single, abiding subject having many states and processes—as something which undergoes changes of state and endures through them all. This is equivalent to saying that the self is conscious of itself as a *reality* or *substance* of which the conscious states and processes are the changing manifestations in time; for a substance is defined as something permanent in the midst of change—as a being which retains its essential identity and continuity through changes of state. The self is also aware of itself as a free, self-determining agent.

It should be borne in mind that the self is never aware of itself as a reality *apart from* or *out of all relations to* the conscious states; it is aware of itself as such *in and through* them. Indeed, as we have said above more than once, the self *with* its states and activities forms *one concrete reality* or *organic whole*. A mental state means simply *the self expressed in a particular way*. Hume said that, whenever he turned his attention inwards, he always found only some particular conscious state; he was never able to reach the real or essential self. He failed to realise that the particular state observed by him was simply the self manifesting itself in that particular way. When I think of something, I am conscious, not merely of the object of thought and the process of thinking, but also of *myself* as the *subject*; and I have the irresistible conviction, that I, who am thinking in this particular way now, am the same person that felt, thought and acted in various ways in the past. I am thus aware of myself as a single self-conscious being.

II. Nature of soul or self *as determined inferentially or indirectly*.

Metaphysical reflection based on inference arrives at the following conclusions :—

(i) There is a single self-conscious power—a single Absolute mind, self or ego evolving, supporting and underlying the plurality of things which constitute Nature; and the finite rational self or soul is a partial and finite reproduction or reduplication of the Absolute. (See Parts I & II). Thus far, then, man has affinity with God Himself. He is a participator in Divine nature and is thus a self-conscious, self-determining or free being and, in a certain sense, *above* Nature.*

(ii) Being a free individual reality, the self is capable of realising its own good. Its highest good consists in its own realisation or perfection; and this implies the working out of the Divine nature implicit in it. (See Ethics).

(iii) Though human soul has freedom of will or power of self-determination, yet, as a *finite* being, it is only *relatively* free. Only the Absolute can be *absolutely* free.

(iv) The conscious soul is not a product of the material body or physical organism; on the contrary, the body is the organ of the soul—it is simply the system of means through which the Absolute individualises or reproduces itself as a finite soul. (Ch. XIV).

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* Thus the Biblical view 'God made man in His own image' is not without truth. Cf. also the *Vedantic* view : जीवात्मा is a partial reproduction of जगदात्मा or परमात्मा ।

CHAPTER XVII.

SOCIETY AND THE INDIVIDUAL.

§ 1. Preliminary remarks.

It is a well-known fact that every individual mental being lives in constant interaction with other minds and with Nature. It follows from this that the development of individual mind must necessarily be influenced by physical and mental environments. (See Ch. XV, § 1 and 2). In the present chapter we proceed to consider the precise relation of the individual mind to the society or community of minds to which it belongs. But this is a question of some difficulty, to which different answers have been given by different schools of thinkers. Two extreme views have been held with regard to this. A brief account of each is given below.

§ 2. Different theories of the relation of the individual to society.

I. *The Individualistic* or *Mechanical theory* (*Individualism*). This theory implies that "society is an artificial aggregate of independent individuals, brought together, and made to co-operate by considerations of expediency, but without any necessary connection, or essential dependence on each other." It assumes that society was formed for the common good by the mutual agreement of individuals. This is the theory of the origin of society by a 'social contract.'

II. *The Collectivistic* or *Organic theory*. (*Collectivism, Socialism, Universalism*). This theory recognises the organic nature of society. According to this view, society is an organic system pervaded by one common life, and the individual members are only its organs or limbs. Society is to the individuals what an organism is to its organs.

It is clear from the above that there are two extreme theories, *viz.*, Individualism and Collectivism or Socialism. The former makes the individual wholly independent of society, and regards society as an artificial conglomeration of independent individuals; the latter makes the individual wholly dependent on, and subservient to, the collective organic whole called society. We have to avoid both these extremes, though we must admit to some extent the organic nature of society. (See § 4).

The theory that the individual depends on society as an organ on its organism is justified by the following considerations :—

(*a*) In the first place, it is easy to see that the new-born child inherits everything he has from a previous state of society. In the words of Prof. Muirhead, "he owes everything he possesses to a combination of forces and circumstances (national, local and family influences) over which he has had no control." (*Elements of Ethics*). Empiricists like Locke and others wrongly assume that mind is at birth like a sheet of white paper—a *tabula rasa* or clean slate, without anything upon it as yet, but ready to be written on—or it is like a lump of soft wax which may be moulded into any shape by forces acting on it from without. The truth is that the child is born with a mass of hereditary, innate and instinctive tendencies, and these are derived from the social life of his ancestors. Thus the individual, even at birth, is already a product of society.*

(*b*) Again, it is the social environment that contributes most to the mental development of the new-born child. Every individual is subjected from birth to social influence which moulds his mental

life. In fact, one of the main conditions which determine the development of the mental power of the individual during his own life-time, is the mental influence of the society in which he is born and brought up—the influence of parents, teachers and companions—the influence of example, training and education. The development of his mental life implies that he appropriates the ideas and knowledge of other men and acquires their habits and learns their arts. "He has to think their thoughts, feel their feelings and reproduce their motives and imitate their actions" before he can attain mental development. A very important part is played in the development of intelligence by a common language which is essentially a "social institution." As Prof. Muirhead observes, "In spoken language there is already a store-house of distinctions and generalisations which the child begins by appropriating." Indeed, even for the physical needs of food, clothing and the like, the individual has to depend on others. In his infancy he is entirely dependent on others. "The human infant is born in such a state of physical imperfection and utter helplessness, that it must be the constant object of 'tenderness, gentleness, unselfishness, love, care, sacrifice' in order to continue in its merely physical life." Even in his mature life, he requires the help and co-operation of his fellow-beings.

We conclude, therefore, that the individual is dependent on society. The *innate* elements of his nature are derived from the social life of his progenitors, and the *acquired* elements of his nature are derived from intercourse with his contemporaries. It has been truly remarked that, from his earliest infancy, the child "has been suckled at the breast of the universal ethos." "The individual owes everything that makes his development into an actual and rational moral being possible, to the society in which he is born. Without intercourse with his fellowmen he would be a rational being only potentially, *i.e.*, he would have in him the power of developing into one under certain conditions; but these conditions would be wanting—being mainly action and reaction with other rational beings. The individual can realise his own life only by identifying his life with that of family, profession, city, country and mankind." (Prof. H. Stephen).

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* As Prof. Muirhead observes, "It was a favourite metaphor with the older individualistic writers to liken the soul of the newly born child to a piece of blank paper, on which, by means of education, anything might be written, and so a perfectly independent and original character given to the individual. It would be a more apt illustration of its true nature to compare it to a word or sentence in a continuous narrative. The soul comes into the world already stamped with a meaning determined by its relation to all that went before—having, in other words, a context in relation to which alone its character can be understood. It sums up the tendencies and traditions of the past out of which it has sprung—giving them, indeed, a new form or expression, inasmuch as it is an individual; but only carrying on and developing their meaning, and not to be understood except in relation to them." (*Elements of Ethics*, Book IV, Ch. I, § 64).

§ 3. Relation of great men to society.

The above view of the dependence of the individual on society seems to be refuted by the existence of great men, 'heroes' or men of genius. It is sometimes argued that such men are independent of their times and societies. They seem to make the societies and times in which they live rather than be made by them. It is said that common individuals may be made to be what they are by society, but society itself is made by specially gifted and inspired individuals. To use the words of Prof. Muirhead, "They stand out in solitary independence of the society in the midst of which they are born. If they have not made themselves, they seem to have been made by God, and to owe little or nothing to their environment. Cæsar, Charlemagne, Napoleon, may thus be proved to have been makers of their social environment instead of having been made by it." (*Elements of Ethics*). This theory has been worked out fully by Carlyle in his "Heroes and Hero-worship."

But this is an exaggeration. It is true, no doubt, that Nature endows these 'great men' with potentialities higher than those of common individuals. But the development of their potentialities requires conditions and opportunities which must be supplied by the society in which they live and move and have their being. They, too, as Hegel says, have to "suck at the breast of the universal ethos." They, too, have to appropriate the ideas and knowledge of other men and have to learn their habits and arts. Without the help and co-operation of their fellow-men they cannot produce any good result. The circumstances of their times—the thoughts and wants and aspirations of their contemporaries—must be favourable to the development and application of their special kind of genius; otherwise they can do nothing. In fact, they are not really the originators of the ideas and sentiments by which they revolutionize society. Such ideas and sentiments slowly and silently accumulate in the mental atmosphere, so to speak, and these great men—the leaders of the times—only express them clearly and give effect to them. They are really the representatives of their times—'the souls of their ages.' "They sum up and give expression to the tendencies of the time. It is not so much they who act as the spirit of the time that acts in them." "The permanent part of his work was 'in the air' when the great man arrived. He was only an instrument in giving effect to it."

§ 4. True view of the relation of the individual to society—idea of a social organism.

The above considerations make it clear that the theory of Individualism cannot be accepted. We must fall back on the theory of the organic nature of society, though we cannot accept it in its extreme form.* For the analogy between physical organism and society should not be pressed too far. In a physical organ the different members or organs have no indepen lives of their own. They exist only as means to the one general life, and have no existence apart it. But an individual member of society is not a means. As a self-conscious and self-controlle he has a relatively independent personal exist his own, and thus far exists *for* himself and as to himself.

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* "It is as true that man is dependent on his fellows as that a limb is dependent on the body. It would be as absurd to ask what would be

The true view, therefore, is this. The indiv in society is at once a means and an end; the indivi exists for society, and society exists for the individu The society moulds the individual, and the indivic in his turn reacts on society. In fact, individual p gress and social progress are correlative.

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the properties of a man who was not a product of the race, as to what would be the properties of a leg not belonging to an animal, to ask what would be the best type of man without considering his pla in society, as to ask what would be the best kind of leg without askin whether it belonged to a hare or a tortoise." "It is therefore necess to speak of society as an organism or organic growth which has some sense, a life of its own." (Leslie Stephen, *Science of Ethics*).

Again, Prof. Muirhead, who is an Idealist, observes, "The individ is not [illegible]tally related to society than the hand or the foot to the body. Nor is it merely that each individual is dependent for life and protection upon society, as the hand or the foot is dependent for its nourishment upon the body, but he is dependent on his relation to society for the particular form of his individuality. It is the function it performs in virtue of its special place in the organism which makes the hand a hand and the foot a foot. In the same way, it is his place and function in society which makes the individual what he is."

CHAPTER XVIII.

PHILOSOPHY OF MORALITY.

1. Preliminary Remarks.

Man is endowed, not only with self-consciousness, also with what is called *moral consciousness*, and re has accordingly sprung up a branch of study led Moral Philosophy or Moral Science (otherwise ed Ethics) whose sole business is to give a clear osition and analysis of moral consciousness and to ve the various problems which arise in the course such an analysis. Now, Philosophy of Mind as a anch of General Philosophy cannot wholly ignore oral problems; it must say a few words about the more mportant ones. Indeed, it may be said that there is a oint at which Mental Philosophy becomes Moral Philosophy; and we have reached that point.

What, then, is meant by moral consciousness? he essence of such consciousness is constituted by the eas of right and wrong and the sense of moral obligation or duty (with the notion of moral law). A brief account of these is given in the following sections. The details belong to Ethics.

§ 2. Consciousness of right and wrong. Standard of Moral judgment and the end of human life.

It is a well-known fact that we pass moral judgments upon our own voluntary acts and those of others. In other words, we say that such and such lines of action are *right* and the opposite are *wrong*. Hence the great problem of Moral Philosophy is this: What is it that enables us to characterise an act as right or wrong? In what does the rightness or wrongness of an act consist? What is the true and ultimate standard or criterion of morality?

Now, this question has been answered in different ways by different schools of moralists. Some take *law* as the standard of morality. Their theory is called the *legal* or *jural* theory. This may assume various forms. Thus, it may be supposed that a system of *internal* laws (*i.e.*, laws intuitively discerned by our inner faculty of conscience) constitutes the moral standard; or it may be assumed that what constitutes the standard is a code of *external* laws—*i.e.*—laws imposed from outside by some superior authority (*e.g.*, State or Society). But whatever may be the form assumed by the legal theory, it is open to this fatal objection: a system of laws cannot constitute the ultimate moral standard, for laws are only means to ends; a law without reference to some end or result is quite meaningless.

There are certain thinkers known as Intuitionists who suppose that the knowledge of moral distinctions is obtained intuitively. In other words, they maintain that actions are right or wrong according to their intrinsic nature, and we intuitively perceive their rightness or wrongness without any reference to any end or ultimate result. The theory assumes two main forms—(i) Moral Sense form and (ii) Rational form. According to the former, we have a special 'moral sense' which enables us to discern intuitively the moral quality of an act by a kind of sensation or taste, independently of reason or thought. According to the latter, our conscience is simply our reason or intelligence which intuitively discovers the general moral principles or laws (classes of right and wrong acts). The fundamental defect of Intuitionism is that it simply tells us that such and such actions are right, without telling us *why*—*i.e.*—without giving us any reason or explanation. It does not explain the moral principles or discover their rational warrant. But Ethics, as the Philosophy or Science of Morality, demands that the moral principles should be examined, explained and justified as far as possible.

It aims accordingly at discovering and defining the ultimate good or the supreme end of life, by reference to which the morality of our acts may be determined and explained.

We conclude, then, that the problem of the ultimate standard of right and wrong cannot be solved, so long as we do not determine the true end of human life, the highest good or the *summum bonum* of man. Indeed, it can hardly be denied that, in every moral judgment, there is at least an implicit reference to some end or consequence.

Now, there are two moral theories in which we find an attempt to discover the highest good or the ultimate end. They are known as *Hedonism* and *Perfectionism*. According to Hedonism, the ultimate end is *pleasure*, so that actions are right or wrong, good or bad, according as they are productive of pleasure or pain. According to Perfectionism, the highest end consists in *perfection of nature*. Those actions are good which promote or are conducive to perfection of nature; those are bad which are subversive of such perfection. In other words, if an act tends to better our life, to make life more perfect, it is good; if it hinders progress towards perfection, it is bad.

Which of these two thories is the better one? The question has been fully discussed in Ethics. It will be sufficient here to point out that Hedonism in its most consistent form is egoistic and sensualistic, and therefore quite inconsistent with morality properly so called. An attempt has, indeed, been made by some modern Hedonists to save Hedonism from these charges. They have tried to transform Hedonism from an Egoistic doctrine into an Altruistic or Universalistic one; and one of them, (*viz.*, J. S. Mill), has gone so far as to distinguish between different *kinds* of pleasure or pleasures of *higher* and *lower qualities*. But it is easy to see that this is equivalent

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to abandoning Hedonism. If one pleasure differs from another in quality, this difference must be due to something other than pleasure. But this is introducing an extra-hedonistic element into the calculus of Hedonistic Ethics. It follows from this that it is not pleasure as such, but some other element that gives moral value to an action, and that element must be conduciveness to perfection of nature; and this is tacitly assumed by Hedonists like Mill, Spencer and Leslie Stephen.

What, then, is meant by perfection of nature? It consists in self-realisation or self-development—in working out, by one's own will and effort, the potentialities of excellence latent in the self—in the development of knowledge, love and sympathy and regulation of impulses, passions and desires under the guidance of reason; and this is accompanied by a feeling of self-satisfaction, happiness or bliss. The theory of Perfectionism assumes that the true 'well-being' or 'welfare'* of man consists in such perfection of nature accompanied by inner self-satisfaction, happiness or bliss.

The above ethical theory is supported by the Idealistic system of Metaphysics which we have accepted above. We have seen before that, according to Idealism, man is an imperfect reproduction of God Himself. Hence his highest good consists in progressively attaining perfection and thereby making himself a truer and more adequate reproduction or copy of the Divine being. His self-realisation means the realisation or working out of the Divine nature which is implicit in him. But how can he make his mind a truer copy of the universal mind of God? How can he bring about within himself a realisation

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* The corresponding Greek word is 'eudæmonia.' Hence the theory is sometimes called 'Eudæmonism'. It may be added here that the Sanskrit word "श्रेयः" has sometimes been used in Indian Philosophy to signify "well-being" in this sense.

of the Divine nature existing implicitly in him? He can effect this and secure beatitude or heavenly bliss by rationally regulating* his animal instincts—by increasing his knowledge of the universe—by developing his capacity of love or sympathy and promoting the welfare of others—in short, by transcending, so to speak, the limitations imposed by space and time.

§ 3. Nature of moral law and moral faculty.

Consistently with the theory of Perfectionism or Eudæmonism accepted above, we may define moral laws as regulative principles in accordance with which we *ought* to act, if we are to attain our true well-being or the highest good—*i.e.*—the highest perfection of which our nature is capable together with the deepest self-satisfaction arising therefrom. The following are the main characteristics of the moral laws :—

I. They are *regulative* principles. In this respect they differ from Natural laws, but agree with political laws, social laws and logical laws which are all regulative and means to ends and are capable of being violated. A natural law implies the uniform way in which things of a certain class actually behave; whereas a moral law implies the uniform way in which we *ought* to act or regulate our conduct. A natural law cannot be violated, but a moral law can be.

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* This view does not recommend the total extirpation of impulses, desires and the animal instincts of our nature. According to it, we are to regulate and control them with the help of our reason. No part of our nature is absolutely bad; it becomes bad when it transcends its proper limits and sphere of exercise. "Whatever is, is rational." Our natural inclinations or tendencies, implanted in us by the rational will of God, are, in themselves, innocent and useful; they have their appointed places in the economy of life; they become bad and injurious only when unrestrained by reason. See the author's *Principles of Ethics*, Chs. XIV and XV. See also Bankim Babu's ধর্মতত্ত্ব।

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II. They are *self-imposed*—*i.e.*—imposed by the rational agent freely upon himself. In this they differ from political laws and social laws which are imposed upon us from outside by a superior authority and enforced by threats of punishment. Moral laws resemble logical laws most closely. Both these classes of laws are self-imposed, regulative and capable of being violated. Logical laws are principles in accordance with which we *ought to reason or regulate our thought*, if we are to attain *truth* or *knowledge*. Moral laws, again, are principles in accordance with which we *ought to act or regulate our conduct*, if we seek *perfection of nature*. If we break the rules of Logic, we have to suffer the evil consequences of error, superstition and self-deception. If we break the rules of morality, we degrade ourselves and sacrifice the potentialities of our nature—we fall into degeneracy and corruption. So much, then, for moral laws. We have next to consider—

Moral faculty or *conscience*. By 'moral faculty' we mean the faculty of moral judgment—the mental power which enables us to distinguish right from wrong. It is essentially *reason* considered as the power of forming an ideal of the perfect self and of understanding what actions and rules of action are consistent with and conducive to perfection of our nature and therefore binding or obligatory on us. Hence it is called *moral reason*. It is also called *conscience*. A full account of the different theories of conscience will be found in Ethics.

§ 4. Custom and social morality. Ethos.

Every society or community is governed by certain rules or laws which are called social manners and customs. They are sanctioned and enforced by common opinion, though without any formal legal enactment. Being the results of collective reason and experience of a society they are beneficial to it at a particular stage of its development.

What, then, is the relation of social manners and customs to morality? They represent the social morality—the general moral spirit—of the community in which they are prevalent and influence the moral character and conduct of the individual members. It is from the social manners and customs that an individual receives his first moral training. Yet they are not absolutely binding on the individual. A person may be wiser than his generation. He may rise above the social morality of his times and discover the inadequacy or evil character of the prevalent customs. If so, he is justified in transgressing them.

We conclude, then, that the social customs should not be viewed as too sacred to be ever violated. Indeed, it is a well-known fact that what is customary is not necessarily good from the moral or even from the utilitarian point of view. Hence there often arises the necessity for social reformation.

Before concluding this section, we should explain a term which is sometimes used in Moral Philosophy; we mean the term *ethos*. By this is meant the *common moral spirit of a community*—*the general moral character of a people*—as expressed in its political, social and religious laws and institutions.

§ 5. Personality and personal rights and duties. Organization of rights.

By the word 'personality' we mean the state of being a *person*. Now, a person means a self-conscious and self-determining being—a being who is conscious of his states and activities as *his own* and of himself as the *subject* of them, and is capable of freely regulating his activities according to his own conception of what is good. A person, therefore, is a being who exists *for* himself and is an *end to himself*.

The word 'duty' means what is *due*, *i.e.*, what one is *bound* or *under an obligation* to do. In other words, a duty means what we *ought* to perform as moral beings. We have duties towards ourselves as well as towards other persons. A *right* means what one can justly claim. Duties and rights are correlative. If it is the duty of one person to do something in relation to another person, then that other person has *a right* to its performance or being done, *e.g.*, the duties of children imply rights in parents, the duties of servants imply rights in masters, and so on. The most general moral right which a personal being possesses is the right of self-preservation and self-development. Every person as such has a moral right to preserve himself, to use and enjoy the fruits of his own labour, to educate himself and thereby to develop and perfect his nature. In short, he has the right of self-realisation (in so far as it is consistent with the same right in others), and it is the duty of others to see that their actions do not hinder his self-realisation.

To sum up: Duties and rights imply each other. A duty in one corresponds to a right in another. "What one has a right to claim, it will be the duty of others to do." Every person has duties to perform in relation to others, and he has a right to expect and demand that others will perform their duties towards him. Every person has a moral right to claim that he shall be treated as a *person*—*i.e.*—as a being who exists in some measure *for* himself with an end or good of his own, and not merely as a means towards the ends of others; and it is his duty to remember that those others are likewise persons and ends in themselves, with rights of their own, and to treat them as such, and not merely as passive instruments for promoting his own pleasure, welfare or good.*

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* Hence the essence of moral law may be stated thus :—

1. "Be a person, and respect others as persons" (Hegel).
2. "Act so as to treat humanity, whether in your own person or in that of others, always as an end and never merely as a means." (Kant).

How, then, do such reciprocal rights and duties arise? A little reflection is sufficient to show that they arise from the nature of human personality and the organic nature of society—the relations of personal beings to one another as members of the social organism. The members of a society are *persons*, *i.e.*, self-conscious and self-controlled realities having relatively independent existences of their own. They thus exist *for* themselves or are ends in themselves and have accordingly certain fundamental *rights*. At the same time, they are *finite* beings and exist as *members*, *factors* or *organs* of the organic whole called society. They exist, therefore, not wholly and solely for themselves, but also for the sake of others or as means towards the ends of others and the whole, and have accordingly *duties*. Indeed, human society is a system of relations consisting of such relations as those of husband and wife, parent and child, teacher and pupil, master and servant, ruler and subject, physician and patient, lawyer and client, buyer and seller; and the various rights and duties of men arise out of such relations.

Organisation of rights.

Organisation of rights is effected through political and social laws. If individuals were able to settle the due proportions of their rights and duties under different circumstances—if, at the same time, every individual respected the rights of others and performed his duties towards them, then there would be no necessity for external laws, and nothing but peace and prosperity would be found in human society. But unfortunately it often becomes extremely difficult for ordinary individuals to determine their rights and duties owing to their imperfect power of understanding, limited experience and the variety and complexity of circumstances and social relations. Moreover, there is such a thing as forcible violation of the rights of some persons by others. Hence there arises the necessity of an organised code of rights and duties—a system of laws defining, explaining and enforcing the rights and duties of individuals and thereby maintaining the harmony of social life.*

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* It should be borne in mind that the object of laws is to guide individuals in complex cases and not to supplant their private moral judgments.

PART IV.

PHILOSOPHY OF GOD.

✓ CHAPTER XIX. whole

INTRODUCTORY REMARKS.

§ 1. Questions involved.

Having discussed in a general way the problems of knowledge, material world, life and soul, we now proceed to study Philosophy of God. What are the contents of the idea of God? How far can the belief in God be justified? What evidence is there for God's existence? How much can we know about His nature or attributes? In what relation does He stand to man? How is He related to the world of things? Is God wholly transcendent? Or is He wholly immanent? Or is He at once transcendent and immanent in a certain sense? Such are the questions discussed in Philosophy of God or Theology.*

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* The word 'Theology' is derived from *Theos* (God) and *Logos* (discourse, reasoning or science). It thus means the branch of study which treats of God. It should be borne in mind that Philosophy of God is sometimes called *Natural Theology* as distinguished from *Revealed Theology*. Natural Theology is so called, because it is based on the study of Nature by means of the natural faculty of reason or thinking. (The word 'Nature' is used here in the widest sense so as to include all that is in the inner nature of man and the outer or external world). Revealed Theology is based on special Divine revelation—*i.e.*—God's revelation of Himself to man through the medium of inspired individuals (seers, prophets, saints).

It may also be added in this connection that Natural Theology is sometimes called Philosophy or Science of Religion (the word 'science' being taken in the wider sense), for the idea of God which is dealt with in Natural Theology is the most fundamental idea involved in religion. Religion may be defined as "man's belief in a being or beings mightier than himself and inaccessible to his senses, but not indifferent to his

§ 2. Contents of the idea of God.

By the word 'God' is meant the supreme self-existent personal power consciously evolving and supporting the system of finite beings called the universe. He is thus regarded, not only as the author or creator of the world-system, but also as its preserver and governor or ruler. It is believed that He not only brings into existence all finite beings with their properties, but also assigns to them their respective functions, gives them their mutual relations and makes them all co-operate as factors of one systematic whole. He is considered to be a self-conscious, self-distinguishing, self-controlling power evolving and co-ordinating all things within Himself, as means to an ultimate end, *viz.*, the realisation of His infinite nature and potentiality. He is further conceived as eternal, absolute or unconditioned, infinite, omnipresent or all-pervading, omniscient or all-knowing and omnipotent or all-powerful.* He is thus viewed as self-sufficient in Himself and personal in the highest and truest sense of the term. He is called unconditioned and absolute, because He is above all conditions and limitations, and is the ultimate ground, source or cause and support of all things. All existence flows from Him, but He is self-existent or *Causa Sui*, containing the ground and

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sentiments and actions, with the feelings and practices which flow from such belief." It is clear from this that religion involves intellectual, emotional as well as volitional elements. The highest form of religion involves belief in one God.

* It is generally admitted in theological circles that though God is omnipotent or almighty, He can do only what is consistent with His own nature. To say that God must act according to His own nature is not equivalent to saying that His power is limited. Every being must act consistently with his own nature, and no power can produce the self-contradictory. Even an omnipotent being, therefore, cannot bring about what is repugnant to His very nature. Thus God cannot refrain from realising, expressing or manifesting Himself; and He cannot do or overcome logical and moral impossibilities.

conditions of His existence within Himself. He is infinite in the sense that He is not limited by anything outside Himself. He is not subject to the limitations of space and time; rather space and time are in Him. There is nothing to limit or control His power, activity or productivity which is inexhaustible. Hence He is called in Theology omnipotent. It follows from the absoluteness and infinitude of God that there are no beings outside of Him, no events outside the range of His activity. All things and minds are contained within the all-embracing energy and consciousness of God; they "live and move and have their being" in Him as factors of His conscious life. God is thus omniscient or all-knowing. He is aware of all beings as products or expressions of His power and factors of His self-conscious life. He contemplates or views all things at a glance, so to speak—the past and the future as well as the present. It is also clear from the above that He is omnipresent, all-pervading or immanent in all. But if He is immanent in the world, He is, in a certain sense, transcendent; He is not identical or co-extensive with the world; He is transcendent, because, (i) as a self-conscious subject, He distinguishes Himself from the world which is the object of His thought and product of His activity, and (ii) His power being inexhaustible, is not used up in any system of finite beings (see Note on Teleology, pp. 148, 149). Finally, since He is above all conditions and limitations, He is regarded as the ideally perfect being.*

§ 3. Idea of the Absolute and its implications.

From what has been said above it is clear that the idea of the Absolute is one of the fundamental ideas involved in the panentheistic or monotheistic

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* The conception or view of God which has been explained above is *monistic* and *monotheistic*. As we have seen before, according to it, there is one ultimate power—one Absolute and Infinite, self-conscious

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conception of God. A general account of the meaning of the term 'absolute' and the origin of the idea has been given before. (See Ch. V, § 4, pp. 81-83; also § 2 of this chapter). It is necessary, however, to state clearly in one place the implications of the idea of the Absolute.

The Absolute is *one unconditioned, self-existent, self-subsistent reality*. It has all the grounds and conditions of its reality within itself, and is, therefore, independent of any condition lying beyond itself. It is independent of everything else, but everything else depends on it. All finite things and minds are derived from it, but it is not derived from any other being. It conditions all things without being itself conditioned —causes all things without being itself caused. It is, in short, the ultimate ground of all—the one uncaused first cause. It has nothing outside of itself and therefore it is not limited or resisted by any other reality. It evolves all beings out of itself—it differentiates itself into many—without being ever exhausted in so doing. It is perfect, self-sufficient, self-determined and exists *for itself*—*i.e.*, as an end in itself and not as a means to anything higher than itself.

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and self-determining being (called by us God) who is the ground and support of all finite things and minds. But there are *dualistic* and *pluralistic* views of God. By the pluralistic conception of God we mean *Polytheism* or the view that there are many gods or divine beings. By Dualism we mean the theory of two ultimate realities. Under this head we may distinguish (i) *Ditheism* or the theory of two gods, a good one and an evil one, and (ii) *Dualistic theism*, according to which there are two self-existent principles, of which one is personal, and the other impersonal—*i.e.*,—one is God and the other is matter. For a full account, see next chapter.

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CHAPTER XX.

GENERAL ACCOUNT AND CLASSIFICATION OF THE THEORIES OF THE WORLD.

(TYPES OF MONISM, DUALISM AND PLURALISM.)

The world presented to us in experience consists of a plurality of things acting and reacting on one another according to uniform laws, co-operating in the production of definite results and reflected and reproduced in the consciousness of finite minds. Hence the deepest and most fundamental problem of Metaphysics or General Philosophy is that of the origin of the world of matter and mind. How did the world with its systems of nebulæ, suns, stars, planets, satellites, and innumerable forms of living organisms and finite minds come into being? Whence did the multiplicity of materials or things arise? How did they come together and produce through their interaction a single unitary system? What is the ground of the correspondence between mind and matter? How did matter come to be such as to be knowable by mind? And how did mind come to be such as to react upon and know matter? What is the relation of the parts or the individual objects to the whole? Is this complex world of things and minds a single unitary system or organic whole and product of a single ultimate power? Or, is it the resultant of the fortuitous combination and interaction of a plurality of independent materials and forces? How is it that the world is at once a unity and a plurality?

Now, various attempts have been made to answer these questions, and such attempts have given rise to different theories of the world. Philosophy of God has to examine at the outset all these theories; for some of them dispense with the idea of God altogether;

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others, again, give rise to various conceptions of God.

What, then, are the different theories of the world? How are the theories to be classified? We may classify the theories as *monistic*, *dualistic* and *pluralistic* according to the number of self-existent realities, powers or principles assumed. In other words, we may say that there are three fundamental theories regarding the world—I. *Monism* or the theory of *one* ultimate reality, II. *Dualism* or the theory of *two* ultimate realities, and III. *Pluralism* or the theory of *many* such realities. Each of these theories assumes several forms. Let us consider them separately.

I. Monism. It consists in affirming that there is one ultimate being—a single self-existent power from which all beings are derived. Under the head of Monism we may distinguish (i) Deism, (ii) Pantheism, (iii) Panentheism and (iv) Agnostic Monism.

(i) According to Deism there is one self-existent and self-conscious being called God who had been at first without the universe, but created it at a particular point of time outside Himself, and having endowed it with all necessary forces, left it to itself. Thus, since the day of creation the world has been going on in its own way independently of God. God merely watches over it to see how it goes, and interferes with its working only on special occasions.

(ii) Pantheism is the extreme form of Monism. According to it, 'God is all', or 'all are God'. (*Pan*=all, *Theos*=God). The universe is, in its essence, identical with God. Now, since God is one and He is all, it follows that the plurality of beings must be viewed only as unreal appearances. God who is one is the essence of all things and minds which have no substantial reality of their own. The one Absolute Being is alone real in the strict sense of the term, and all finite things are simply modes of its operation. 'The One' alone really exists, and 'the many' are simply illusions.

(iii) Panentheism. According to this, "all are *in* God." (*Pan*=all, *en*=in, *Theos*=God). All finite beings are evolved by, and exist in, one Absolute Being that makes itself a concrete self-conscious power—a real, living God in the proper sense of the term—in and through them. Thus, God and the world, the Infinite and the finite, the Absolute and the relative, the One and the many, together form one concrete reality; they are correlative factors of one organic whole. Hence finite beings are not unreal or illusory; they have relative reality and exist as factors of the universal mind of God. The theory is otherwise called Concrete Monotheism.

(iv) Agnostic Monism. According to this, there is one unknowable, incomprehensible or inscrutable absolute power from which all things proceed. Knowledge of its nature is wholly unattainable. (See Spencer's Theory, pp. 83, 85, 87-90).

II. Dualism. According to this, the world is a joint effect of the operation of *two* self-existent, ultimate and independent powers, principles or beings. The theory assumes two forms:

(i) Ditheism or the theory of two gods. It consists in affirming that there are two rival self-existent and self-conscious powers—two gods, so to speak, of whom one is all-good, and the other is an evil one. These are in eternal conflict with each other; and as the world is the result of their simultaneous activity and conflict, it involves an admixture of good and evil.

(ii) Dualistic Theism or Dualistic Monotheism. It assumes that the ultimate substances or realities are two in number, but of these one is personal and may be called God, and the other is impersonal matter.

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God has acted upon and moulded the self-existent matter and has thus created the world. Thus God is *one*, though the realities (including Him) are *two*. Hence it may be called Dualistic Theism or Dualistic Monotheism.

III. Pluralism. It is so called, because it assumes a *plurality* of self-existent and independent units, forces, entities, realities or substances and affirms that the world is a product or result of their combination, interaction or co-operation. This wears two forms :—

(*a*) Materialistic Pluralism (called Atomism). It supposes that the whole universe (including life and mind) has been produced through the fortuitous working and combination of a number of self-existent units called material atoms which were originally unconnected and scattered at random through space.

(*b*) Spiritualistic Pluralism. Under this head we may distinguish (i) Polytheism—*i.e.*—the belief in many gods or divine beings supposed to preside over and rule the different processes and departments of Nature; and (ii) Monadism—the theory of monads. It supposes that the ultimate units, which are innumerable, are not material atoms, but are spiritual units, entities or potential souls, and it is these which, through their combination, have built up the organised cosmos which we call the world.

✓CHAPTER XXI. whole

Complete Account and Review of the above Theories.

§ 1. Preliminary Remarks.

A general account and classification of the different theories of the world have been given before. It will be found afterwards that the monistic theory of the world known as Concrete Monotheism or Panentheism is the most adequate theory on the whole, inasmuch as it satisfies alike the head and the heart, and is quite consistent with, and supported by, the established results of the different sciences. But before we proceed to accept this theory, we should carefully examine the rival theories. In the present chapter our business will be to review all the theories of the world. First of all, we shall consider the pluralistic theories, then the dualistic ones, and, last of all, those that are classed as monistic.

§ 2. Pluralism.

As we have seen before, according to this view, the world is the result, product or joint effect of the combination, co-operation or interaction of a number of self-existent and originally unconnected units, substances, realities or entities. It appears in two forms—(*a*) Materialistic Pluralism (called Atomism) and (*b*) Spiritualistic Pluralism. The great difficulty of all forms of consistent Pluralism is to explain how such a plurality of originally independent and unconnected units could come together of themselves and begin to co-operate and interact in such a way as to produce, by their interaction and co-operation, this extremely complex and organised system of systems which we call the universe.

But let us examine the two forms separately.

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(a) *Materialism.*

Materialism may be briefly defined as the philosophical theory which seeks to explain the entire universe (including life and mind) by what is known as matter. It consists in supposing that matter is the only self-existent and ultimate substance or reality from which all beings are derived. According to this view (to quote the words of Prof. Tyndall, a distinguished materialist), "matter contains the promise and potency of all forms of existence."

We may begin by considering the assumptions made by Materialism, *i.e.*, the postulates or premises from which it starts.

(i) It assumes at the outset that matter is in itself just what it appears to the senses of a human being to be. In other words, it begins by assuming what is called "the Common Sense View of matter." Now, to the senses matter appears as a reality existing by itself outside and independently of mind, and as extended in space, but divisible into parts. Inference and imagination lead the human mind to resolve the parts into molecules, and the molecules into atoms of various sizes and weights. Hence Materialism finally assumes the existence of a number of self-existent, indivisible, indestructible and independent atoms scattered at random through space, and regards all things as formed by their combinations.

(ii) But the atoms occupy space or have positions in space, and they move through and resist motion in space. Hence Materialism has to assume space as another self-existent reality.

(iii) But these are not all. The atoms move and resist each other's movements, and they combine with and separate from one another. All these imply the presence of force or energy. Hence force also is to be assumed as self-existent. In fact, modern Materialism assumes several forces as self-existent, *e.g.*, the force

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of gravitation, the forces of chemical attraction and repulsion, and so on.

We see, then, that Materialism assumes an infinite number of self-existent, indestructible, indivisible units called atoms, distributed at random through space, and endowed with self-existent attributes of motion, attraction and repulsion, and explains all beings (whether inanimate or animate, unconscious or conscious) with all their attributes as the resultants of the random working or fortuitous combinations and recombinations of these atoms in infinite time and space.

Thus, according to this view, the world is simply a conglomeration of atoms combined in an infinite diversity of ways. It is the fortuitous combinations of atoms that have given rise to all objects. Even living and mental beings have arisen out of the spontaneous concurrence of atoms.

It is clear from the above that the theory of materialism incorporates into itself the theory of spontaneous generation or abiogenesis. In other words, it assumes that life originates out of non-living or inanimate matter. It has also to assume that consciousness somehow originates from material atoms and forces, because it has no other way of accounting for it. According to it, mind has no substantial reality of its own; it is only an inessential and surplus by-product of the organised matter called the physical organism. It is nothing but an aggregate of conscious states which are derived from and dependent on the material body, like flashes of light and heat elicited by the working of a complicated machine.

The foregoing remarks make it clear that Materialism is wholly *anti-theistic* or *atheistic*; for it dispenses with the idea of God or a creative mind altogether.*

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* It may be pointed out in this connexion that modern materialists accept the theory of mechanical evolution. They avail themselves of the

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Criticism.

The theory of Materialism as an ontological theory involves a number of insuperable difficulties. It virtually assumes everything and explains nothing. The main difficulties are indicated below. Some of these have been already fully stated.

(i) It assumes the hypothesis of spontaneous generation. But this hypothesis has been wholly discredited. (See Ch. IX, § 3, pp. 113-115).

(ii) Its account of the origin of consciousness is unsatisfactory and unscientific. (See Ch. XIV, pp. 190-191).

(iii) It involves an epistemological difficulty and is based on a 'circular argument'. (See Ch. XIV, pp. 191-192).

(iv) The most serious charge against Materialism is that it utterly fails to account for the organic unity, harmony, order and universal reign of law which we find in the world-system. (See pp. 98-99, pp. 130, 131, also p. 247). Materialism assumes that the physical cosmos in its present organised form and all the various species of plants and animals have resulted from the casual interaction of originally unconnected material atoms and blind physical forces. But it is inconceivable that atoms and forces operating blindly and by chance could ever have assumed such orderly forms. In fact, the theory leaves too much to chance and thus makes itself quite unscientific. An impartial examination of the facts of nature, life and mind constrains us to believe in the existence of a supreme mental power organising the world-system. It is absurd to suppose that the atoms, by fortuitously combining and recombining in a variety of ways, have at last assumed the shape of this extremely complex and organised world-system. The universe as revealed by modern science is a system of systems—it comprehends a number of subordinate systems. It is full of combinations of parts which constitute wholes, and of means which are adapted to ends. The most natural, rational and obvious explanation of the order and adjustments which the world thus presents is that they are due to a mind or intelligence. Mind alone can account for order and adjustment, for the co-ordination of parts into a whole, or the adaptation of means to an end. Thus Teleology is justified. (See Part II, pp. 130-131. See also Ch. XXIII and Note on Grounds of belief in God).

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nebular hypothesis of cosmological evolution as propounded by Laplace, and the Darwinian, Lamarckian and Spencerian theories of biological evolution.

We conclude, then, that Materialism cannot be accepted as a sufficient explanation of the world. Indeed, to accept such a dogmatic theory is really equivalent to ignoring Logic, Epistemology and Science altogether.

(*b*) *Spiritualistic Pluralism.* This is so called, because it assumes a *plurality of spiritual beings, realities or substances.*

(i) The typical form of Spiritualistic Pluralism is known as *Monadism* or the doctrine of Monads. According to this, the ultimate or elementary units which enter into the constitution of the universe are essentially *spiritual* and may be described as *potential* or *subconscious souls* capable of developing into actual conscious beings under certain favourable conditions. There is a hierarchy of monads, but all of them may be generally characterised as self-contained, self-sufficient, independent of one another, containing all principles of development within themselves, and incapable of receiving any influences from outside.

Critical Remarks.

The above theory of Spiritualistic Pluralism involves the same difficulty that besets Materialistic Pluralism or Atomism. How could a plurality of unconnected and independent units come to operate together and build up an orderly cosmos? How are we to explain the unity of the universe—the universal harmony, connection and interaction of things? Consistent Pluralism cannot answer such questions.

The difficulty of consistent Pluralism led Leibnitz, the propounder of Monadism, to modify the doctrine considerably and to make it *quasi-pluralistic*. In his attempt to overcome the difficulties of Pluralism, he was led to work out the theory of 'one monad of all monads' and 'pre-established harmony.' According to this view, the monads are not literally self-existent; they are really 'emanations' or 'fulgurations' from one absolute monad or 'monad of all monads' called by us God. It was this being who gave existence to the monads and established a harmony amongst them. Owing to this pre-established harmony, whenever there is any change in any one of the monads, there arise corresponding changes in the others, though there is no direct interaction or causal connection among them. Each monad is a mirror of the universe—*i.e.*—reflects the whole universe from its own point of view. God determines from the beginning the internal developments of every monad, so that the monads all go on developing in correspondence, like clocks set to the same time, and thus by this pre-established harmony constitute a single unitary system.

But it is easy to see that this is really equivalent to rejecting Pluralism and returning to Monism.*

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* The pluralistic theory of Leibnitz was a reaction against the extremely monistic or pantheistic philosophy of Spinoza. For a full account of the theory of Leibnitz, see his 'Monadology', translated into English by R. Latta. It has been remarked that "Leibnitz's 'monads' are simply Spinoza's 'modes' substantialised." It may be added here that the Realism or the doctrine of reals as advocated by Herbart, a Post-Kantian German philosopher, is analogous to the Monadism of Leibnitz. The Realism of Herbart was apparently a reaction against the monistic systems of some Post-Kantian thinkers (*e.g.*, Fichte). Kant sometimes spoke of 'one thing-in-itself' and sometimes of 'many things-in-themselves.' Hence, out of his

(ii) *Polytheism.*

By Polytheism is meant the theory which assumes the existence of a plurality of spiritual or divine beings (called gods) controlling the various processes and departments of the world—*e.g.*, the sun, the moon, the stars, seas, rivers, &c. As examples of Polytheism we may take the religious systems of the ancient Egyptians, Greeks, Romans and Scandinavians. Polytheism not only recognises many divine beings, but also regards them as finite beings limited and resisted by each other. Some polytheistic systems represent the gods as self-existent, eternal and immortal. But usually the gods are looked upon as derived beings—as either born of parents or derived in some way out of some impersonal substance, chaos or nature.

Criticism.

(i) But Polytheism as explained above is more mythological than philosophical. It is too anthropomorphic and can arise at a time when the personifying tendency of human mind is very strong and unrestrained by reason.

(ii) Further, like other forms of Pluralism, Polytheism fails to satisfy the legitimate demands of reason and to explain the unity and harmony of the world-system. A polytheistic world would be wholly a world of strife and discord. "The more thoroughly the universe is studied and examined, the more apparent does it become that it is a single self-consistent whole—a vast unity in which nothing is isolated or independent. The very notion, therefore, of separate and independent deities, and still more, of course, of discordant and hostile deities, ruling over different departments of nature, is opposed to the strivings and findings of reason."

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there arose the monistic systems of Fichte, Schelling, Hegel and Schopenhauer, as well as the pluralistic system of Herbart. Quite recently, James has tried to revive Pluralism and Polytheism. See Note at the end of this chapter.

§ 3. Dualistic theories.

We next proceed to consider the different forms of Dualism. As shown before, it is the theory of two powers, realities or principles of opposite nature acting on and limiting each other. It appears in two forms: (*a*) Ditheism and (*b*) Dualistic Theism, and these should be separately dealt with.

(*a*) *Ditheism*. By this is meant the theory of two gods—two rival and self-existent or co-eternal personal powers contending with and limiting each other. According to this view, one of these personal beings is all-good, and the other is an evil one. The good being tries to produce a good and perfect world, but he is unable to carry out his plan completely, inasmuch as he is opposed by the evil spirit. Whatever is good or beautiful comes from the good being; whatever is evil, imperfect or deformed comes from the evil spirit. It is the evil spirit that is the cause of all imperfections and all evils, natural as well as moral.*

The above theory of Ditheism is found in the teachings of the ancient gnostics. It is also found in the religious view of the ancient Persians and the modern Parsees. The good spirit is called by them *Ahura Mazda* and the evil one, *Ahriman*, and since the world is a result of their simultaneous activity and conflict, we discover everywhere in it the presence of good and evil.

It is clear from the above that, according to this view, though the two gods are self-existent, yet neither of them is infinite in power or efficiency, because each limits the power and resists the activity of the other.

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* The popular Christian conception of God and Satan resembles the above dualistic view. But still Christianity cannot be strictly called dualistic, for, according to it, Satan was created by God. It is thus essentially monistic and monotheistic. Popular Christianity may, however, be called a sort of Conditional Dualism as distinguished from the two forms of Absolute or Complete Dualism explained above.

(*b*) *Dualistic Theism*. Like the above theory, this theory, too, recognises two self-existent principles, beings or realities, but restricts personality or consciousness to only one of them, making the other reality impersonal. The personal being is *God*. He is a self-conscious, rational and good being and is the *artificer* of the world. The impersonal being is *matter* (*hyle*). It is the *substance*, *material* or *stuff* out of which the Divine artificer makes the world. God acts upon matter and tries to mould it into an orderly and perfect world, but is unable to realise His end fully, because He is always resisted by the intractable material. In other words, God cannot make the world as good, perfect and beautiful as He pleases owing to the resistance and imperfection of His materials. Thus, according to this form of Dualism, though God gave shape and order to the world, He did not create the materials of the world, and though He is self-existent and perhaps infinite in goodness, yet He is not infinite in power, because limited and resisted by matter.*

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* Something like this is found even in the teachings of Plato and Aristotle. Plato describes the self-existent matter or 'hyle' as formless and even as 'non-existent,' because it is nothing in particular. According to him, God tries to create a perfect world out of the formless substance, but its resistance prevents Him from doing so, and so the world remains imperfect and incomplete. Thus the Divine plan or idea is never fully realised and Divine work is never completed; and so the world-process goes on eternally.

It may be added in this connection that Dualistic Theism was favoured even by J. S. Mill. According to him, the Teleological Argument is the only scientific and logical argument, but the belief in a personal God who is resisted by matter is the only logical conclusion to be drawn from the argument. The innumerable signs of design in the world prove that there is a beneficient and wise designing power or God, but the presence of evils and imperfections in the world shows that He is a being of great but limited power; and we can explain the limitations of His power by supposing that He is unable to overcome wholly the imperfection and resistance of His materials. God is described by Mill as "a Being of great but limited power, of great and perhaps unlimited

Critical Remarks.

(i) The Dualistic theory known as Ditheism is more mythological than philosophical. It originated at a time when the personifying tendency of man was too strong.

(ii) Both the above forms of Dualism are too anthropomorphic—*i.e.*—they assume that God is like a finite human being. Ditheism is based on the analogy of a good person who is opposed by a wicked one in the realisation of his plan. Dualistic Theism is based on the analogy of a human artificer who is unable to overcome the imperfections, defects and resistance of the materials with which he is supplied. It is true that some amount of anthropomorphism must remain in religion. But still the above theories cannot be accepted, as they are too anthropomorphic.

(iii) Dualism is inconsistent with the results of modern science. Like Pluralism, it fails to explain the organic unity and harmony of the world-system. As Dr. Flint remarks, "A dualistic religion must, with all the strength it possesses, oppose science in the accomplishment of its task—the proof of unity and universal order." (*Theism*, p. 13). In fact, "if there be two absolutely independent substances as Dualism supposes, it is impossible to understand how they could have come into interaction with each other, so that the one could act upon the other—God on matter and matter on God. We can understand interaction only between correlative members of the same ultimate reality, included within the unity of one system." (Dr. H. Stephen, *Problems of Metaphysic*).

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intelligence, but perhaps, also, more narrowly limited than his power; who desires, and pays some regard to, the happiness of his creatures, but who seems to have other motives of action which he cares for more." See his Essay on Theism. It should be remembered that J. S. Mill was originally an agnostic or sceptic.

§ 4. **Monistic theories.**

Having discussed the Pluralistic and Dualistic theories, we now proceed to review the different monistic theories which agree in affirming that there is one self-existent reality from which all finite beings are derived. As we have found before, there are four monistic theories, *viz.*, Deism, Pantheism, Agnostic Monism and Panentheism or Concrete Monotheism. Let us examine them separately.

(*a*) *Deism.* The theory of the world known as Deism may be briefly stated thus: There is one Infinite and Absolute personal God who, at a certain point of time in His eternal self-conscious existence, first designed a world of finite things and minds in His thought, and then realised His idea by creating, out of nothing, such a world outside Himself; and having invested it with all necessary forces, properties and materials, abandoned it to itself. Thus, He stands apart or is quite separate from the universe which is an immense and wonderful machine constructed by Him long ago. But He still watches the machine and interferes with its working only on special occasions or in times of emergency, though, generally speaking, it goes on independently of Him, as a machine designed, constructed and set going by a human artificer goes on of itself without further interference.

Thus Deism not only distinguishes God from the world, but separates and excludes Him from the world. It represents God as an Absolute personal being who exists apart from the world, and the world as something which, although created by God, is now independent of Him, and capable of sustaining and developing itself and performing its own work, in virtue of its inherent energies.

It will be easy now to see that Deism makes the following assumptions:

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(ii) *Two phases or states of Divine life*—an *acosmic* phase followed by a *dualistic* phase. God at first existed *without any world*. That was the *acosmic* phase in His life. But since creation, there have been *two* realities—God or the Absolute Reality and the world of conditioned reality. Hence this phase of Divine life may be called the *dualistic* phase.

(iii) *Complete Divine transcendence.* When the world was created and finished, it became external to and independent of God, just as a machine becomes independent of the contriver or maker after its construction. Thus God is wholly *transcendent, i.e.,* outside, above and beyond the world and is not in any sense immanent or present and operative in it, just as a watch-maker is wholly outside the watch and is not in any sense inside it.

(iv) *Distinction of First or Primary Cause and Second or Secondary Causes.* God who created and collocated the materials and forces of the world may be called the "First Cause." The material things with the forces implanted in them as well as the finite minds with their free wills may be called the "Second or Secondary Causes." The First Cause has done His work and retired from the field, so to speak, leaving the world wholly to the operation of second causes. To quote the words of Dr. Martineau, "The world is a vast magazine of 'second causes,' which enable it to go on of itself, and would do their duty though He were asleep." (*Study of Religion,* Vol. II, p. 135). It follows from this that those natural phenomena which cause so much suffering to living beings (such as volcanic eruption, earthquake, famine, &c.) are produced directly by the material things and forces operating as second causes, and not by God Himself as the First Cause. Similarly, moral evils or sins are due directly to the free wills of finite rational minds operating as second causes.

(v) *Occasional Divine interference.* Though God as the First Cause is wholly transcendent, He always watches the universe, and interferes with its working occasionally—*i.e.*—in times of emergency. As Mr. Armstrong remarks when explaining this view, "God still watches the machine, and now and then, when he sees occasion, he interferes by a special act of divine power overcoming or suspending the action of natural forces by the introduction, for the emergency, of his own divine force. This intervention it is that constitutes miracles and special providences which are outside of the regular working of the machine." (*God and the Soul*, p. 44).

The theory explained above is called by several names. (i) It is generally called *Deism* as distinguished from *Theism* which makes God transcendent as well as immanent.* It is also called (ii) *Anthropomorphic Theism*, because it is based on the highly anthropomorphic analogy of a human artificer or contriver and his work; (iii) *Abstract Theism*, because it *abstracts* God from the world, *i.e.*, "it makes the world o be unnecessary to the life of God, and God o have existence in abstraction from any world"; nd (iv) *Conditional Dualism*, because, according o it, though the ultimate reality is *one*, yet *now* there re two independent realities, *viz.*, the ultimate reality or God Himself and the world of finite beings whose existence, though real, is conditional. This theory was widely prevalent in the Eighteenth Century.

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* The word 'Deism' is derived from Latin *Deus* meaning God. The vord 'Theism' comes from Greek *Theos*, meaning God. Thus the literal ieaning of Deism and that of Theism are precisely the same, *viz.*, belief i God. But still "Deism is distinguished from Theism by probably all ecent theologians in substantially the same manner. Some oppose it to heism; others include it in theism as a species in a genus; but this does iot prevent their agreeing as to the distinction to be drawn. Deism is egarded as, in common with theism, holding, in opposition to atheism, hat there is a God, and, in opposition to pantheism, that God is distinct rom the world, but as differing from theism in maintaining that God s separate from the world, having endowed it with self-sustaining and elf-acting powers, and then abandoned it to itself" (Dr. Flint, *Anti-heistic Theories*, Appendix, Note 1, p. 442).

Critical Remarks.

But the above theory is open to serious objections:

(i) If God existed at first without a world, how did the need of a world arise? Was there any defect in His being without a world? If so, why did He not feel the defect before? How could He spend all 'pre-eternity' without a world? What was the reason of His sudden activity? As Dr. H. Stephen remarks, "If God existed from all pre-eternity without a world, it is difficult to understand why He became active and creative at a particular point. What need had God for a world at this point? Why did He not continue wrapt up in His own self-sufficient unity for all post-eternity?" (*Problems of Metaphysic*, Fifth Edition).

(ii) Again, by denying God's presence in, and control over, the affairs of the world, Deism prepares the way for Dualism and Materialism. If the world can go on so long in virtue of forces inherent in it without any support from God, as Deism assumes, then it is but a step further to say that it may have gone on of itself in the same way eternally. A deist may thus be led back to Materialistic Atheism which dispenses with the idea of God altogether; or he may fall back into that form of Dualism which makes God and matter co-eternal and outside of each other.

(iii) The deistic view cannot be seriously maintained, because it is too anthropomorphic and based upon the analogy of a human artificer and his machine. The relation between a human contriver or artificer and his work is that between one finite being and another contained within the world. A human contriver is supplied with materials for his work. He uses a portion of the energy existing already in the world. But, as Deism admits, God is an infinite being and has to evolve or create both the material and energy of the world. Hence the relation of God to the world must be entirely different from that of a human contriver to his work.

(iv) The theory involves a contradiction, inasmuch as it assumes that God existed as a thinking being through all eternity prior to creation without anything to think about. According to Deism, God is an eternally living and self-conscious being; but how can there be eternal life without eternal activity? How can there be thought and consciousness without objects or materials? As has been pointed out in p. 39, a life without activity, a real, concrete power without any manifestation, a subject without an object, a thought without anything to think about, a self-consciousness without a plurality of materials, must be viewed as impossible. Hence the existence of God as an eternally living and thinking subject implies the existence of the world as the product of His activity and object of His thought. An eternal world or series of worlds seems to be necessarily implied in the eternal life and consciousness of God.

We conclude, then, that the Deistic view of creation in time is unsatisfactory.* "God's life," as Lotze remarks, "is perpetual creation and providence."

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* Another objection is often raised against Deism, *viz.*, that it is inconsistent with the infinity of God and makes Him a limited or finite being; for, according to it, finite things and minds exist outside of God, resist His will and purpose, and thereby impose limitations on Him. In reply to this, Deists say that God *freely and voluntarily* restricts or limits His own infinity to leave room, so to speak, for the activities of finite beings, and such limitation, being self-imposed and voluntary, does not take away the infinitude and absoluteness of God. God retains His infinite power, inasmuch as He freely imposes restraint upon Himself and withholds His power and is able to check, control and take away at any time the powers deputed to finite beings.

al reality of God as a thinking principle.' (J. H. Stephen, "involves [illegible] content of ought, and, therefore, the eternal correlativity of subject and object, of what thinks and what is thought, of will and what is willed, of Absolute and relative, of God and world." (*Problems of Metaphysic*, p. 351).

Hence we should consider the other monistic theories.

(*b*) *Pantheism.* According to Pantheism, which is extremely monistic; God is all that *is*; He is the only reality, and all finite beings are simply aspects, modifications, modes or parts of Him and have, accordingly, no substantial reality of their own; He is, in short, 'one and all,' the all-comprehensive, eternal, absolute, self-existent power, and the independent existence of finite beings is only an illusion or unreal appearance.

Thus Pantheism deprives all finite things of independence and reality and makes God to be the only substance or essence of all. It follows from this that the consciousnesses of animals and men are only God's consciousness of Himself in finite and partial ways or from finite points of view. The forces of Nature as well as the volitions of men are but modes or applications of the universal power of God. Even man, therefore, has no freedom or independence in any sense.

Thus consistent Pantheism necessarily leads to Determinism or Necessitarianism.

The foregoing remarks make it clear that, as regards the relation of God to the world, Deism and Pantheism represent two extreme tendencies of thought. Deism makes God *wholly transcendent*. It not only distinguishes God from the world, but separates and excludes Him from the world. Pantheism, on the contrary, assumes that God is *wholly immanent*

in the world. It denies that God and the world either do or can exist apart, and asserts that the world is, in its essence, identical with God.

We see, then, that, as regards the relation of God to the world, Deism is the opposite extreme to Pantheism. But from another point of view, the opposite of Pantheism is represented by what is known as Pluralism. We know that the world is a unity in plurality; in other words, it is made up of many parts or units, and yet, at the same time, constitutes a single whole or system. How can this fact be accounted for? How can the world be at once a unity and a plurality? How can it be *one*, though made up of many? This is one of the most fundamental and perplexing problems of Philosophy. Now, when dealing with this problem, human thought tends to go to two extremes. Thus,

(i) It may overlook, forget or ignore the unity underlying plurality and assume that innumerable self-existent units or realities have built up, through their interaction, the aggregate called the world. This tendency of thought finds expression in what is called Pluralism which may be either materialistic or spiritualistic. Or,

(ii) It may go to the other extreme and wholly sacrifice variety and plurality to unity—it may lay such stress on the unity of things as to imperil their individuality. This tendency of thought to ignore, overlook or explain away the plurality of things and leave only the unity, finds its complete expression in Pantheism or Acosmism which, as we have seen before, denies the reality of all finite beings and reduces them to unsubstantial modes or phenomena of one ultimate reality.

We conclude, then, that Pluralism and Pantheism are diametrically opposed to each other. The former ignores the One and leaves the many; the latter ignores the many and leaves the One. The former denies the existence of a single principle unifying, underlying and [illegible] the world, and [illegible] that the world is a product or result of the combination and interaction of a plurality of self-existent units or elements. The latter denies the reality of the many to exalt the One.

The monistic theory explained above is called by several names. (i) It is called *Pantheism*, because, according to it, all is God or God is all (Gr. *Pan*=all, *theos*=God). Thus Pantheism etymologically means 'all-God-theory'. It is also called (ii) *the doctrine of complete divine immanence*, because, according to it, God is wholly immanent in the universe, or God and the universe are identical; (iii) *Abstract Monism*, because it goes to the extreme of abstracting the One from the many and admitting the reality of the One only; (iv) *Extreme Monism*, for the same reason; and (v) *Acosmism*, because it denies the reality of the cosmos or world, and asserts that God alone is real (*a*=not, *cosmos*=world).*

The doctrine of Pantheism has at all times been advocated by many eminent thinkers. Indeed, as Dr. Flint remarks, "Wherever we find traces of speculation on the origin of things, there we also find traces of Pantheism". (*Anti-theistic Theories*, p. 341). Many distinguished philosophers of ancient India and Greece were pantheists. Many thoughtful men of modern Germany, France, Great Britain and America were also pantheistic in their tendency.

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*Pantheism assumes a multitude of forms. A few pantheistic systems describe the Absolute as an impersonal or unconscious law, force, power or substance. Others do not deny the self-consciousness or self-distinguishing intelligence of God or the Absolute; on the contrary, they assert that Divine consciousness must be infinitely superior to human consciousness. Some of these systems describe God as 'super-personal' or 'supra-personal', because, according to them, the word 'personal' is suggestive of human limitations and cannot adequately describe the infinite fullness and depth of God's being. A full discussion of the personality of God will be found in the sequel. See Ch. XXII.

Pantheistic ideas pervade the writings of Shelley, Carlyle and Emerson. When we consider how widespread Pantheism has been, the question naturally arises in the mind: What is the source of its strength? Why has it proved so attractive? We should accordingly consider here not only the defects of Pantheism, but also its merits or excellences. It should, however, be borne in mind that there are very few systems that are *purely* pantheistic. The Vedantic system of ancient India, the Eleatic system of ancient Greece* and the system of Spinoza are generally taken to be typical instances of pantheistic philosophy. But, as is well known, while some commentators of Vedanta give it a pantheistic interpretation,† others interpret it quite theistically. Similarly, the validity of the assertion that Spinoza pantheistically sinks the many into the One is disputed by some. Fichte, Schelling and even Hegel have been accused of teaching Pantheism; but Hegel's philosophy is *panentheistic*, and not exactly pantheistic in the proper sense of the term, because, according to him, the world of finite beings is indispensable to the concrete reality and life of God.

Critical Remarks.

(i) The most obvious charge against Pantheism is that it is contrary to the testimony of our general self-consciousness and that of our moral consciousness. We are clearly conscious of ourselves as distinct,

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* The Eleatic philosophy of ancient Greece was founded by Xenophanes and perfected by Parmenides. According to this system, Being and appearance, truth and opinion, reason and sense, are absolutely opposed to each other; they are contradictory and irreconcilable. Being is one and is alone real. It is apprehended by reason alone; and when reason apprehends Being, there is true knowledge. Senses apprehending appearances give what may be called opinions. Since Being alone is real, it follows that the world of appearances is unreal or illusory.

† Those Vedantic thinkers who advocate thorough-going Pantheism regard *Brahma* or the Absolute Being as the only reality and the world of finite beings as *Maya* (illusion or unreal appearance).

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individual, personal beings or realities having the power of self-determination. We perceive a distinction between right and wrong; we understand that we are free to choose between them; we feel that we are responsible for our choice and are praiseworthy or blameworthy. These convictions can never be avoided or eradicated. They are facts as certain as any others in the world, and a theory which is not consistent with them ought to be rejected. But all these clear convictions would be quite meaningless and false if Pantheism were true.

Thus the great objection to Pantheism is that it is quite inconsistent with the human self's general consciousness of itself as a substantial reality and a free agent, and specially with its moral consciousness of right and wrong, obligation and responsibility, merit and guilt; for, according to this theory, all the thoughts and actions of men are really those of God. By taking away all individuality from man and all freedom from human will—by making human volition to be a mode of the universal power of God, it strikes at the very roots of morality.*

(ii) Pantheism is really a one-sided theory. We have seen before that, if Pluralism goes to one

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* Cf. Dr. Flint's *Anti-theistic Theories*, pp. 432-433—"Pantheism requires us to regard as delusive the consciousness which each man possesses of being a self or person...There are millions on millions of self-conscious beings or persons in the world. And Pantheism, in order to adhere to its dogma of absolute unity, must contradict the testimony borne by the consciousness of all these beings. It is logically bound to affirm that each of them is under a delusion when he supposes himself to be truly a self or person. But what does this imply? Why, that from true persons really distinct from all other beings—free, responsible, moral —it must reduce and degrade them to mere semblances; for with personality, their freedom of will, responsibility, duty, must be likewise sacrificed."

Again, "If human personality and freedom are illusions,' then must obligation, guilt and retribution be the absurdest fictions." (*Ibid*., p. 396).

See also Mr. Armstrong's "God and the Soul", p. 64 :—"Pantheism only becomes deadly to vigorous religion and morality when it makes the

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extreme and ignores the underlying unity of the world, Pantheism or Extreme Monism goes to the opposite extreme of ignoring the plurality of things and leaving only the unity. Thus both of them are one-sided and inadequate. A true theory is that which recognises both the one and the many—the aspect of unity as well as the aspect of plurality found in the world, without ignoring either of them. Such a theory is Panentheism or Concrete Monotheism which affirms that the One and the many, the Absolute and the relative, are organically related as factors of one concrete reality, and that each apart from the other would be an abstraction.

(iii) The pantheistic conception of God or the Absolute Unity is not at all satisfactory. Pantheism in its most extreme and consistent form regards God as a 'barren identity'—as 'pure and immutable being' in whom there can be no element of difference, change or plurality. It affirms that "it is the nature of the Absolute to be indivisible unity, excluding all contradiction and thereby all ground of plurality; from which it follows that the world of experience, appearing, as it does, to be a plurality of mutually exclusive things contradictory to one another and to the Absolute, can have no substantial existence and can be only illusory appearances." But such a pure being, as Hegel points out, would be equivalent to nothing. A being which is not the becoming of anything in particular, a unity which has no element of difference in it, a power which does not express itself in the concrete, an Absolute and Infinite which does not reveal itself in the finite and relative,

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man's soul, the man's self, a portion of God. Theism claims that the human soul is a free cause, a separate island of individual will in the midst of the great ocean of the Divine Will. Leave us man confronting God, not absorbed in Him, and the conditions are preserved for the ethical life of the individual and also for the communion of the soul with God as another than itself, the very possibility of which is destroyed if a separate personality is wiped out."

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is a fictitious abstraction. "If God be the abstract supersensible essence or being which is void of all difference and all specific character, He is only a bare name, a mere *caput mortuum* of the abstract understanding." Indeed, Pantheism must either reduce God to an unreal abstraction, or regard Him as the sum total of all finite beings, rational and non-rational, moral and immoral.*

(iv) Pantheism in its most consistent and extreme form (or, as it is called, Acosmism) assumes that finite beings are only appearances or illusions and as such do not require further explanation. But even if they are appearances, illusions or mere phenomena without substantial reality, they require to be explained or accounted for; and they cannot be explained on the extremely monistic theory of one immutable Absolute Being; for "they imply that besides the absolute being there are minds which can be haunted by appearances, and which can be deluded into believing that these appearances are realities." Thus we see that Pantheism which is extremely monistic cannot explain the plurality of finite beings without contradicting

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* Cf. Dr. Liddon's Bampton Lectures for 1866, pp. 448, 449: "In conceiving of God, the choice before a pantheist lies between alternatives from which no genius has as yet devised a real escape. God, the pantheist must assert, is literally everything; God is the whole material and spiritual universe; He is humanity in all its manifestations; He is by inclusion every moral and immoral agent; and every form and exaggeration of moral evil, no less than every variety of moral excellence and beauty, is part of the all-pervading, all-comprehending movement of His universal life. If this revolting blasphemy be declined, then the God of Pantheism must be the barest abstraction of abstract being... He must be conceived of as utterly unreal, lifeless, non-existent...This dilemma haunts all the historical transformations of Pantheism, in Europe as in the East, to-day as two thousand years ago. Pantheism must either assert that its God is the one only existing being whose existence absorbs and is identified with the universe and humanity; or else it must admit that He is the rarest and most unreal of conceivable abstractions; in plain terms, that He is no being at all." (Quoted by Dr. Flint in his *Anti-theistic Theories*).

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itself. Panentheism offers a more satisfactory explanation of the plurality of finite beings constituting the world; for, according to it, they are evolved by the One Absolute Being or God as the means and materials of His self-realisation and exist as factors of His concrete life.

Merits of Pantheism.

But though Pantheism has the above defects, it has its own peculiar merits or excellences which should not be overlooked. The great truths of Pantheism are its conceptions of the unity and spirituality of the universe and those of the absoluteness and immanence of God. It is a natural reaction from Pluralism, Dualism and Deism. It is, in fact, the expression of a sense of Divine presence in the universe. It emphatically affirms the all-pervading activity of God. It abolishes the hard and fast line of demarcation between the Creator and the created, God and the world, mind and matter, and insists on the omnipresence of God and the complete and ceaseless dependence of the universe on His power. Unity, which is the goal of all speculation, is reached by Pantheism in the strictest form without any duality. It teaches men that God is not 'a distant deity,' but is the indwelling spirit of all.' It teaches them to sacrifice egotism completely, to rise above the good and evil of the world, to glory in being parts and particles of God, and to yearn after rest in Him. It thus gives some satisfaction to the religious wants of man. By centring all in, and even by sacrificing all to, the one Absolute Existence, it ministers in some degree to devout emotion and affection. That there is something grand and fascinating in the conception that all things and minds are but parts, modes or manifestations of One Universal Being is abundantly proved by the wide prevalence of Pantheism. We may even go so far as to say that Pantheism sometimes gives moral strength to men. This seems to be a paradox at first sight, for we have already seen that it strikes at the very roots of morality by taking away all individuality of man and all freedom from human will. But whatever may be the legitimate consequences of Pantheism as an ontological theory, we find, as a matter of fact, that pantheists are generally remarkable for their piety and purity of character.* How can this fact be accounted for? How are we to reconcile this fact with the legitimate consequences of the theory? The answer is obvious. Pantheism ministers moral strength to men by teaching them that God is immanent in their souls and worketh in them and through them. As Dr. Flint remarks, "The conqueror, the philosopher, the poet, feels himself borne upwards, as it were, and along a path of glory and success, by the force of an indwelling God. The hours of highest achievement and joy are those in which man is frequently least conscious of his weaknesses and limitations as a man, and most prone to identify himself with God." (*Anti-theistic Theories*, p 400). Indeed, Pantheism is often the religious expression of an exalted moral nature. As Prof. Mitra observes, "Pantheism, viewed merely as an ontological doctrine, may present the above difficulty, but Pantheism regarded as the end of a saintly life solves the difficulty. . . . At the highest stage of moral culture, the conflict between inclination and duty, between prudence and conscience, between human desire and divine behest, dies away. . . . The human constitution at such a stage beats in unison with the divine, and one feels himself to be, as it were, one with God." (*Elements of Morals*, pp. 455-456).

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* See Prof. Mitra's *Elements of Morals*, pp. 454-455:—"Pantheism, consistently carried out into action, should incline one rather to reckless conduct than to the prosecution of a virtuous life. But, as a matter of fact, we find that pantheists in all ages are noted for their spotless character and transcendent piety. How chaste, for example, are the lives of Parmenides, Spinoza, and the Vedantists generally! The expression 'a Parmenidean life' has really come to mean a pure spotless life."

So much, then, for the merits and defects of Pantheism. It will be seen afterwards that Panentheism is free from the defects of Pantheism, but possesses all its merits or excellences. We have next to consider what is called

(c) *Agnostic Monism.**

This is the view of Spencer and his followers. According to this theory, there is one infinite, absolute and eternal energy or power which is the ground of all beings; but nothing can be known about that power beyond the bare fact of its existence. We know that it *is*, but we do not know *what* it is. The theory is *monistic*, because it assumes that there is *one* ultimate power or reality. It is *agnostic*, in so far as it declares that reality or power to be wholly unknown and unknowable. This theory has already been fully explained and examined and need not be discussed again. (See pp. 83-85, pp. 87-89 and p. 245). It will be sufficient here to repeat once more that the Absolute cannot be regarded as unknown and unknowable, because, as the supporters of this theory themselves tell us, the entire universe is the 'manifestation' of that being. All that we can reasonably say is that the nature of that being cannot be *fully* or *exhaustively* known (*Vide* p. 90). Indeed, we cannot know the existence of a being without knowing some of its attributes. How, then, can it be said that nothing is knowable about the Absolute except its existence?

We conclude, then, that the Absolute is not wholly unknowable. It is known just as anything else is known, viz., through its self-manifestations.

Finally, we proceed to consider what is called

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* The Spencerian theory of Agnostic Monism is sometimes called *Neutral Monism*, because it professes that it is neither idealistic nor materialistic. It is, however, combined with Naturalism which tends to degenerate into Materialism. Thus, as Dr. J. Ward remarks, "the neutrality of this theory is neither strict nor impartial." (*Naturalism and Agnosticism*, Vol. II, p. 207).

(*d*) *Panentheism or Concrete Monotheism.** A clear and concise account of this theory has already been given (*Vide* pp. 38-40, also p. 245). It consists in affirming that all finite things and minds are evolved from, sustained by, and included within the all-embracing energy and consciousness of God who realises the potentialities of His nature in and through these beings. Thus, according to this theory, there is a vital connection between God and the world, the One and the many, the Absolute and the relative, the Infinite and the finite, the Unconditioned and the conditioned—each being essential or indispensable to the concrete reality of the other. Without a world of finite beings, God would be an abstract power only; without the evolving, co-ordinating and sustaining power of God, there would be no world at all.

We see, then, that, according to this theory, the evolution, preservation, unification and co-ordination of a plurality of beings constitute the means by which the Absolute One raises itself from the condition of an abstract potentiality into that of a concrete, self-conscious reality. All things and minds, therefore, may be said to exist for the sake of one ultimate end, *viz.*, the self-realisation and self-manifestation of the Absolute mental power.

How, then, does this theory differ from Deism and Pantheism? In what respects is it superior to them? What are its merits or excellences?

(i) Deism represents God as wholly transcendent and denies that there is any necessary, vital or organic

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* The philosophical form of Monotheism defended in this book has been called *Panentheism*, because, according to it, all things are *in* God. The name enables us to distinguish this theory from Pantheism as commonly understood.

The term 'Panentheism' was extensively used for the first time by Christian F. Krause, a thinker of great merit (1781-1832). By this he meant "the doctrine of the immanency of all things in God, considered as a transcendent personality and yet united in substance with the creature."

connection between God and the world. It represents Him as essentially an infinite and absolute person having concrete self-conscious reality in Himself apart from and independently of any world of finite things. It assumes that He voluntarily limited His own infinity and absoluteness at a particular point of time and thus gave independent existence to a world of limiting and resisting beings outside Himself, and that, prior to such creation, He remained wrapt up in thought through all eternity without anything either within or without.

In opposition to the Deistic view, Panentheism or Concrete Monotheism represents God and the world, the Absolute and the relative, as organically related to each other and as constituting together one concrete reality or organic whole. It assumes that the universe of inter-related finite beings is the concrete expression of one Absolute power. It affirms that finite beings exist in God as the materials of His life and thought, and that it is in and through them that He becomes aware of Himself as the subject which thinks and designs them, and as the agent which evolves, sustains and co-ordinates them.

It is clear from the above that Panentheism avoids the difficulties involved in Deism. We have seen before that Deism falls into a self-contradiction, by supposing that God existed before creation as a thinking being without any materials of thought. But Panentheism has no such difficulty, because, according to it, God has been eternally engaged in consciously evolving and co-ordinating a world or 'world-series' as the material of His spiritual life. It thus gives a sufficient reason for the existence of the world, which Deism fails to do. Again, Deism cannot reconcile the infinity and absoluteness of God with the existence of the world of finite beings in a satisfactory way. It has to assume, as we have seen before, that God voluntarily limits His own infinity and makes Himself finite in order to leave room for finite

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beings, and that what is called creation means nothing more than this voluntary self-limitation of God. But Panentheism explains His infinity and absoluteness in a way which is quite consistent with the real existence of finite beings; for, according to it, the Absolute and the finite are not opposed and exclusive, but are correlative members of one organic whole, each existing in and through the other.

(ii) Let us now compare Panentheism with Pantheism. We have seen before that the most abstruse problem of Philosophy is 'the problem of one and many.' How can the world be a collection of *many* different things and at the same time be *one* world? How can it be *one*, though made up of *many*? (See p. 263). Pantheism in its extreme form solves this problem by practically denying the reality of 'the many' and reducing them to unreal appearances or unsubstantial phenomena of 'the One.' It lays such stress on the unity of all reality that the element of difference is simply ignored or explained away. Pluralism, again, in direct opposition to Pantheism, ignores the underlying unity of the world. Panentheism mediates between these two extremes by recognising equally the elements or aspects of unity and plurality, identity and diversity, present in the world. It maintains that the one Absolute power realises, or gives concrete existence to, itself by differentiating itself into many beings and co-ordinating them as factors of its conscious life. Thus, according to this theory, finite things are not unreal appearances or phenomena, but have real existence, though their reality is relative, dependent and conditioned.

It should be carefully borne in mind that Panentheism represents God as both transcendent and immanent and thus differs from both Deism and Pantheism. It emphatically affirms that the entire universe is animated and pervaded by the spirit of God and that without and beyond Him nothing

exists. "It looks on God not as outside the universe, but as ever operating within it; not as having once for all created, and then confined His action to occasional interference, but as continuously creative; not as having set up certain laws of nature as substitutes for His own action, or certain forces other than His own will-force, but as Himself energising in all the forces of nature, so that the laws of nature are only the habits of His own activity." It thus far contradicts Deism and agrees with Pantheism. But it differs from Pantheism in so far as it holds that God is not wholly immanent in the world, but is also transcendent in a certain sense. According to Panentheism or Concrete Monotheism, God is transcendent, because He is not identical or co-extensive with the world or the mere sum total of finite beings. He is more than the world, and His energy is not used up in the processes of the world. Indeed, His infinite power or energy can never be exhausted in any system of finite beings. There are measureless reserves of Divine energy wholly beyond that which acts in the universe. There is a sphere of Divine existence wholly transcending the system of things. The world is in Him, but He is not merged in the world. Moreover, as a self-conscious subject, He distinguishes Himself from the world (which is the object of His thought and product of His activity) and thinks it without being identical with it. (See § 5 below).

We conclude, then, that Panentheism reconciles Pluralism with Monism, Deism with Pantheism. It incorporates into itself all that is true and essential in them, and in this way goes beyond them. It excludes what is erroneous and retains what is correct in them. Thus it is more satisfactory than every one of them. It is the only theory which can explain the facts of Nature, life, mind and conscience more adequately than any other theory. It finds empirical confirmation in what is called the teleological argument.

The organic unity and harmony of the world-system, the universal presence of law and order, the extremely complex and admirable adaptations of means to ends, the wonderful signs of selection, combination and gradation that we find everywhere in Nature prove that there is a supreme mental power. Indeed, modern science tends with overwhelming force towards the monistic conception of the world—towards the view that the world is a single unitary system and is the expression of a single rational power present and operative in it. Thus this theory is consistent with and supported by the established results of the special sciences. Moreover, it is justified by epistemological considerations. On no other hypothesis we can explain the nature and origin of knowledge and the correspondence between mind and the external material world. Thus it is the most adequate theory on the whole and is, therefore, preferred by Rational Philosophy.*

So much, then, for the merits of Panentheism. We may now explain more precisely the relation of God to the world and to the human soul even at the risk of repetition.

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* The theory has several names. It is called (i) *Panentheism*, because, according to it, all are *in* God; (ii) *Concrete Monism*, because, according to it, there is *one* ultimate reality or power that makes itself concrete in and through the world-system; (iii) *Concrete Monotheism*, because, according to it, there is *one* God who realises Himself by evolving and sustaining the world-system as the means and material of His thought; (iv) *Semi-pantheistic* view, because it lays much stress on the immanence of God like Pantheism, but is not *wholly* pantheistic, inasmuch as it makes Him transcendent at the same time; (v) *Monistic Spiritualism* or *Spiritualistic Monism*, because, according to it, there is a single absolute mental power or spiritual principle whence all things proceed and by which they are sustained; (vi) *Idealistic Monism*, *Monistic Idealism* or *Absolute Idealism*, because it assumes that the world is the working out or realisation of one Absolute Idea; and also (vii) *Ideal-Realism*, *Realistic Idealism* or *Objective Idealism*, because it asserts the objective reality of the world and the validity of our knowledge, and at the same time assumes that the world is derived from an absolute idea or mental power.

§ 5. Relation of God to world and man.

We have already explained the different theories of the relation of God and the world. We have rejected the dualistic, deistic and pantheistic views and have accepted the panentheistic theory according to which God is *immanent* as well as *transcendent*. The nearest and the most expressive analogy is the unity of mind or self in the midst of the plurality of ideas. In other words, we may best elucidate the panentheistic view by comparing the relation between God and the world to that between the finite self-conscious mind or soul and its system of conscious ideas and activities. As the conscious life of the human mind, self or soul is a unity in plurality, so the conscious life of God is a unity in plurality. As the self *with* its plurality of conscious states and processes forms one concrete reality or organic whole, so God *with* the finite things and minds forms one concrete reality or organic whole. As the self is *in* its states and processes, ideas and activities, so God is *in* the things and minds of the world; and as these psychical phenomena exist *in* the self as factors of its life, so all things and minds are *in* God as factors of His life. Thus God is immanent in the world, as the soul is immanent in the psychical states. But this immanence of God is in no way opposed to His transcendence. As the soul is, in a sense, more than the psychical phenomena or conscious states and processes, and is not the mere sum total of them, so God is more than the finite beings, and is not the mere sum total of them. As the self is always aware of itself as the subject having the states and processes and as the agent performing the acts, and thus distinguishes itself from them without being identical with them, so God is aware of Himself as the absolute subject and agent and distinguishes Himself from the world (which is the object of His thought and product of His activity) without being identical with it. Thus God transcends the world. It should be borne in mind that God, as an infinite self-conscious power, infinitely transcends the world, for no sum total of finite things can ever exhaust the infinite or the inexhaustible.

We have explained above in a general way the relation of God to the world of finite beings. It must be admitted, however, that, as human mind is finite, it cannot fully understand or clearly conceive the relation of God to finite things and minds.* We may now consider the relation of God to finite beings under two heads :—

(i) *Relation of physical things to God or the Absolute.*

Physical things are not ends to themselves; they are only passive products and instruments and exist for the sake of one absolute end, *viz.*, the self-realisation and self-expression of the Absolute power. God evolves and sustains all physical or material things and forces as the means and materials of His self-realization. Thus, the whole of the material universe is the product or expression of, and is kept up by, the mental energy of God.

(ii) *The relation of the finite rational self-conscious mind to the Absolute Mind—of man to God.*

Like physical things, the minds of men are also evolved and sustained by God as the means and

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* As Dr. H. Stephen says, "Their relation involves both identity and diversity, internality and externality, in a way which we cannot adequately picture to ourselves." (*Problems of Metaphysic*, 5th edition, p. 355).

"It is the ultimate something which cannot be represented in imagination. The nearest analogy is the unity of mind in the plurality of its ideas." (*Ibid.*, p. 368).

"Finite thought cannot be expected to exhaust the connection between Absolute and finite. The innermost essence of the relation and how the finite rises out of the Absolute, remains beyond the reach of finite thought, because to know it exhaustively would be to exhaust the infinite itself." (*Ibid.*, p. 369).

materials of His self-realisation. But there is a difference between these two classes of finite beings. Being impersonal, physical things are only passive products and instruments; they are not in any sense ends in themselves. But man is a personal being. In other words, he is a self-conscious and self-determining being. He is not, therefore, on the same level with physical things. He is, to some extent, an 'end in himself'; he exists for himself and has an end or good of his own. He determines his activity from within himself according to his idea of his own good or the end and ideal of his life.

What, then, is the precise relation of the finite mind to the Absolute mind—of man to God? In so far as man is a self-conscious and self-determining or free being with an end or good of his own, he is a reproduction, reduplication, image or copy of God and shares in His nature. (See p. 23; p. 42; p. 187, p. 195, p. 222). But he is at the same time a finite, relative or conditioned being, determined by his relations to other finite beings, mental and non-mental, and to the Absolute out of which they all arise and in which they "live and move and have their being." It follows from this that the end or good of an individual can be realised only in correlation with the goods of other finite beings and as a factor of the absolute end which is the end of all ends, and for the sake of which all exist.

We see, then, that the relation between God and human souls is different from that between Him and physical things. The human soul is a finite reproduction of the Absolute self. It is, in a special sense, a meeting-point of the Absolute and the relative, the Infinite and the finite. Physical things as well as human souls arise out of God and exist in Him as factors of His life; and they all manifest His power and glory. But a human soul is a more adequate manifestation of God; it is, as we have seen before, a finite reduplication of the Absolute Mind. It follows from this that religion and morality are essentially in the attempt to work out or realise the divine nature that is implicit in man.

To sum up: Man is not a passive product of the forces of nature. He has affinity with, and is a reproduction of, God Himself. In this sense, the Biblical statement that "God made man in His own image" is true. Like God, he is a self-conscious and self-determining or free being having a good or end of his own (though it must be admitted that Divine consciousness is infinitely higher than the human). But every individual is a finite, relative or conditioned being, inasmuch as he derives his existence from the Absolute and is determined by his relations to other individuals and physical things existing within the Absolute. His highest good can be realised through his contribution to the universal good. It must be admitted, however, that the precise relation between the human mind and the Absolute Mind cannot be fully understood or comprehended with our finite intellect, because, in order to be able to understand the relation fully, we must exhaustively understand the nature of the Absolute; but this is impossible.

NOTE ON PLURALISM.

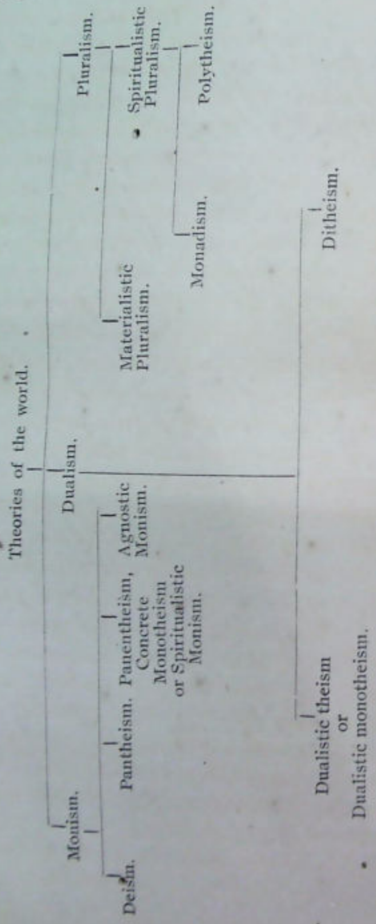
The different forms of Pluralism have already been fully explained and criticised in pp. 247-253. It has been remarked in p. 253 (footnote) that Prof. James has tried to revive Pluralism in recent times. A brief account of his Pluralism is given below.

Prof. James follows Fechner up to a certain point. We have seen before that Fechner who is a panpsychist supposes that explicit consciousness springs forth wherever the processes of nature attain a certain measure of co-ordination and systematic unity and that there are lower and higher grades of finite spiritual beings—infra-human, human and supra-human (see pp. 197, 198). Now, Prof. James agrees with Fechner thus far. But Fechner is a monist and a monotheist, for he assumes that all finite beings—all finite consciousnesses, infra-human, human and superhuman—are included within one universal consciousness which is God. James, however, favours the theory of 'a pluralistic universe.' According to him, the world is a conglomeration, heap or plurality of self-existent forces without any unity of cause, plan or purpose. These forces are, indeed, tending or struggling towards universal unity and order, but have attained co-ordination and systematic unity only here and there by chance. Unity is to be looked for at the end as a result, and not at the beginning as a cause or principle. The fortuitous interactions and co-ordinations of natural forces give rise to finite conscious minds of different orders—infra-human, human and perhaps super-human—plants, lower animals, men and perhaps gods. Thus we see that Prof. James revives Pluralism and Polytheism.

Criticism. The main difficulty of every form of Pluralism has already been pointed out in § 2 of this chapter. (See p. 247, pp. 250-251 and p. 253). We may make here an additional remark on the view of James:

According to this theory, unity is to be looked for at the end as a result, but not as a causal principle existing from the beginning. But it is easy to see that there can be no unity at the end as a result without unity at the beginning as a principle. In other words, there can be unity at the end as a result only if the different elements, materials and forces are products of a single force or energy which makes itself concrete in and through them—which differentiates itself into many in order to attain thereby a higher, richer and more concrete unity. We should, therefore, return to Monism.

The classification of the theories of the world may be indicated in the tabular form given below:—



CHAPTER XXII. whole

NATURE OF DIVINE CONSCIOUSNESS.*

(DIVINE PERSONALITY.)

§ 1. Preliminary Remarks. Possibility of Divine consciousness.

The theory of Panentheism or Concrete Theism assumes that God is a self-conscious, self-distinguishing and self-controlling power, evolving, sustaining and co-ordinating all finite beings within Himself as means to one ultimate end, *viz.*, the realisation and expression of His own infinite nature. This is equivalent to assuming that God is a *personal* being in the highest sense of the term; for by personality we mean self-consciousness and self-controlled activity. We proceed to consider here the nature and contents of Divine consciousness. But it should be borne in mind that it is impossible for human intellect to give an adequate or complete account of the conscious life and attributes of God. As Dr. Paulsen rightly remarks, "The undertaking would be about as hopeless as the attempt of a worm to give definitions of the form and content of the human mind." (*Introduction to Philosophy*, p. 252).

But before we proceed to consider the nature of Divine consciousness, we have to answer the question: Is Divine consciousness possible at all? Some suppose that the Absolute cannot possibly be a personal or self-conscious being.† They contend that consciousness is possible only in the case of finite

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[*] A general account of the nature and attributes of God has been given in Ch. XIX, § 2 & 3, pp. 240-242.

[†] This was maintained by Fichte and Schelling (in their earlier writings), Hartmann, Hegelians of the Left Wing (e.g., Strauss and Feuerbach) and Spencer. In recent times the personality of the Absolute

beings, and they apply the psychological Law of Relativity to prove this. The gist of their argument is as follows: a self can be conscious of itself only by contrasting itself with a not-self which is external to it. A person can never say 'I' without raising the idea of an external not-self or non-ego from which he discriminates himself. But there is nothing outside the Absolute, from which it can distinguish itself. Absolute consciousness is therefore impossible.

Thus, according to some thinkers, the Absolute is an impersonal power. Consciousness, they say, implies a consciousness of distinction and limitation, resistance or being acted on. It springs out of the relation and inter-action of the self and the external not-self. The self is conscious of itself only in so far as it feels itself acted on by, and reacting against, an external not-self—only in so far as it contrasts itself with, and distinguishes itself from, something other than and outside of itself. The expression 'Absolute or universal consciousness,' or 'Infinite personality,' therefore, involves a self-contradiction. It is like 'round square' or 'a golden cup of stone' (to use a familiar Bengali expression.

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has been denied by Dr. McTaggart who gives a new interpretation of Hegel. In direct opposition to these thinkers, it has been maintained by Lotze and Hegelians of the Right Wing (such as Stirling, Green, Cairds and many others) that full personality is possible only in God who is eternally realising Himself as an actual universal and absolute self-conscious spirit in and through the plurality of finite beings. Dr. Paulsen also holds that God is eternally self-conscious, but he prefers the word 'supra-personal' to the word 'personal,' because, according to him, the latter word is suggestive of human limitations and cannot adequately express the infinite fullness and depth of God's being. He uses the word 'supra-personal' in order to indicate that 'God's nature is above human mind, not below it'; but he 'finds no fault with any one for calling God a personal being in this sense'. Mr. Bradley uses the word 'super-personal'.

For a criticism of Dr. McTaggart's view, see Dr. Hiralal Halder's "Hegelianism and Human Personality," Ch. II.

But this anti-theistic view is open to objection. The essential condition of consciousness is the existence of objects or materials which can be distinguished by the self from one another and from itself as the thinking subject. But it is not necessary that these materials or objects of consciousness should be external to the self. It is immaterial whether they are supplied from without or evolved from within. Now, it is true that there is nothing outside God, for He is absolute. But He has got a whole world of things and minds within Himself and has thus sufficient materials for consciousness. He evolves all things from within Himself, and by distinguishing them from each other and from Himself, He becomes conscious of Himself as well as of them.

We see, then, that there is no reason why God who is absolute should not be regarded as personal or self-conscious. It is true that consciousness involves contrast and discrimination, a recognition of agreements, differences and relations, and therefore requires a plurality of changing materials and objects. But the Absolute, as containing within Himself the finite or the relative with all their agreements, differences and relations, has all the materials required for contrast and discrimination and therefore for conscious personality. As has been already pointed out more than once, the Absolute and the relative together form one concrete reality. It is clear, therefore, that the anti-theistic argument against absolute experience involves the mistake of ignoring the relative in which the Absolute power makes itself concrete.

The advocates of the anti-theistic theory base their argument on the analogy of the finite human self and fail to distinguish an *accidental* circumstance of human self-consciousness from the *essential* condition of consciousness. The essential condition is, as we have seen before, the possibility of contrast and discrimination, and therefore the existence of a plurality of objects or materials which can be contrasted with, and discriminated from, one another and the thinking self. But the externality of these materials or objects is not at all indispensable to consciousness. It is true that there are external objects limiting and affecting us, and that our self-consciousness involves a consciousness of them; but this is due to our finite nature. Even in our own case we find that though we have objects external to us, yet the immediate materials of our consciousness—those which we are most directly conscious of, and in and through which we become aware of ourselves—are our own changing states, activities and products, our own feelings, ideas and volitions. The external objects are known to us rather indirectly as implied and revealed in our conscious states known as sensations. As we are finite beings, the materials of our consciousness—the changing states and activities of our minds—must be caused or called forth by other finite beings which limit us, and against which we have to preserve ourselves by external action; and that is the only reason why external objects are necessary to us. But if we were absolute beings, evolving all our materials—all our states and activities—from within ourselves, unconstrained by anything external, there would be no reason why we should not be conscious of them and of ourselves all the same. Of course, in that case, our consciousness would be considerably different from what it is now; but still it would be consciousness; and it would be a higher kind of self-consciousness, higher than anything which we can conceive. This leads us to the question of

§ 2. Nature of Divine consciousness.

It follows from what has been said above that Divine consciousness must be different from finite consciousness in many respects. In the first place, Divine consciousness must be conceived as *universal consciousness—i.e.*, awareness of all the contents and

processes of the world and the feelings, thoughts and volitions of finite minds; for all finite beings "live and move and have their being" in God as factors of His all-embracing conscious life. Since God is omnipresent or immanent in all, His knowledge includes everything. Again, His consciousness, while including within it the conscious feelings, thoughts and volitions of finite minds, must transcend every form of finite consciousness and differ from it, not only in degree, but also in kind. The consciousness of a finite being involves a consciousness of being acted on by, and reacting against, other finite beings existing independently of or external to it; but no such experience can be present in Divine consciousness, for there is nothing outside God. Let us contrast Divine consciousness with our own human consciousness which is the highest form of finite consciousness that we know of. Our self-consciousness is determined by the opposition and contrast between the self and the external not-self. In other words, in being aware of ourselves, we are aware, at the same time, of the external not-self which exists outside and independently of us and affects, limits or resists us. But God's self-consciousness must imply (i) an awareness of Himself as the absolute subject and agent and (ii) that of His self-evolved ideas, activities and products and the relations of these to one another and to Himself; it is not accompanied by any awareness of being resisted or acted on by things existing external to Him. All finite things and all finite minds with their consciousness of activity and mutual resistance are contained as subsidiary factors within the universal self-awareness of God. It is, therefore, a much higher thing than what can be comprehended by us. Our cognition of other things takes the form of *sense-intuition, i.e.*, perception based on sensation; but God's cognition may be described as "intellectual intuition", *i.e.*, "intuitive awareness of things otherwise than in terms of sensation." His cognition of things consists in internal perception or intuition of all beings as factors of His conscious life and as modes and products of His voluntary activity. Our knowledge of things is partly perceptual and partly inferential; but God's knowledge is wholly intuitive. Our experiences are necessarily limited in time and place; and it is inference which extends our knowledge beyond the bounds of actual experience. But God views all things—the past and the future as well as the present—at a glance, so to speak. He views all things from the standpoint of the whole, and as parts of one eternal plan and system. Again, there is considerable difference between Divine volition and our own. Our willing or volition owes its origin to such impulses and desires as are suited to the states of beings having limitations and needs. But God has no limitations, and He has no needs and desires in the human sense. We act upon objects external to us. But God has no objects outside of Him to act upon. The distinction between prior design and posterior execution is peculiar to our activity. We first form an idea of something that does not exist, and then, with the help of the materials that are supplied to us, we realise the idea. But God is not supplied with materials from outside. In Him, volition and execution must coincide. He thinks, and the act takes place. Reality is His volition and thought. It is the unfolding of His potentiality, the explication of His *actuosa essentia*.

It is clear from the above that Divine consciousness is a much higher kind of consciousness which cannot be comprehended or conceived by the finite mind.

§ 3. Sub specie æternitatis.

We are now in a position to understand the meaning of the expression *sub specie æternitatis*. This phrase literally means 'under the aspect of eternity'—'from the standpoint of the eternal'—'f

an eternal and universal point of view'. Hence, when it is said that, according to Panentheism or Idealistic Philosophy, God views things and events *sub specie æternitatis*, nothing more is meant than the fact that He regards them all from an eternal and universal standpoint, *i.e.*, from the standpoint of one absolute whole, and as parts of one eternal plan and system. God transcends the limitations of space and time. He is the eternal and absolute subject and agent who evolves and co-ordinates all things as factors of one system and as means towards one ultimate end. By Him, therefore, all things are viewed as necessary parts or members of one absolute organic whole in relation to His absolute self. His knowledge is not limited to the present only, but extends equally over the past, present and future which are all present to Him in one eternal *now*. It is clear from the above that things and events can be fully understood, only when considered *sub specie æternitatis*; for they are parts of one organic whole or system, and parts can be understood only in the light of the whole.*

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* Hence many thinkers explain the evils and imperfections of the world by saying that they appear to be such only because we view them from our finite standpoint, and that if we could consider the entire cosmos *sub specie æternitatis*—if we could interpret everything by reference to the whole, we would find that everything is part of one rational plan.

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CHAPTER XXIII.

GOD AS UNIVERSAL REASON.

§ 1. Evidence in support of Theism.

Idealistic Philosophy assumes that the world is pervaded by, and is the embodiment or expression of, one Universal Reason. We have already explained the grounds for believing in this view. The world as revealed by modern science is a unity in plurality—a plurality of parts or elements which are related to one another in such a way as to form one organic whole. It is, in fact, a system of systems, for it comprehends a number of subordinate systems. It is full of combinations of parts which constitute wholes, and of means which are adapted to ends. How, then, are we to account for order and adjustments, for the co-ordination of parts into wholes or the adaptation of means to ends? How can we explain the presence of law and harmony everywhere in the world of experience? How can we account for the fact that the world, though made up of many parts or elements, is really one unitary system or connected whole? We can explain such facts only on the supposition that the world is the product, expression, manifestation or embodiment of one Universal Reason. (See pp. 97-99, also pp. 130-131).

We see, then, that the idealistic, panentheistic and teleological theory of the world accepted above is quite justifiable. It is really supported by the results of the special sciences. Consider, for instance, the picture of the universe drawn by modern Astronomy. The solar system to which our earth belongs is a vast, varied and orderly system. The planets and satellites which constitute it are so adjusted in respect of magnitude and mass, distance, rate, and plane of direction &c., that the whole is stable and secure, while part ministers to part as

organ to organ in an animal body. And the solar system is but a fraction of the universe; "it is but one of hundreds of millions of systems, some of which are incalculably larger than it, yet the countless millions of suns and stars are so arranged and distributed in relation to one another, and in accordance with the requirements of the profoundest mathematics, as to secure the safety of one and all, and to produce everywhere harmony and beauty. Each orb is affecting the orbit of every other—each is doing what, if unchecked, would destroy itself and the entire system—but so wondrously is the whole constructed that these seemingly dangerous disturbances are the very means of preventing destruction and securing the universal welfare, being due to reciprocally compensating forces which in given times exactly balance one another."

Let us next consider what the science of Chemistry has got to say about the universe. It tells us that "order of the strictest kind, the most definite and exact proportions, are wrought into the very structure of every world, and of every compound object in the world, air and water, earth and mineral, plant and animal. The vast variety of visible substances are reducible to rather more than sixty constituent elements, each of which has not only its own peculiar properties, but its own definite and unvarying combining proportions with other elements, so that amidst the prodigious number of combinations all is strictly ordered, numerically exact. There is no chemical union possible except when the elements bear to each other a numerically constant ratio. Different compounds are always the products of the combinations of the elements in different, yet strictly definite, proportions, there being no intermediate combinations, no transitional compounds. If each element did not admit of union with many others, the world would be dead and poor, its contents few and unvaried; if their unions were not always regulated

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The foregoing remarks make it clear that the sciences of Astronomy and Chemistry support the contention of Theistic Idealism that there is a supreme intelligence working according to plan and purpose. In like manner, it may be shown that the sciences of Physics, Geology, Palæontology and the various biological and mental sciences lead to the same conclusion. The laws and uses of light and heat, electricity and magnetism as explained by Physics, and the adjustments which they presuppose, all point to Teleology. The sciences of Geology and Palæontology prove that there has been advance or progress in the main, and that "the history of the earth corresponds throughout with the history of life on the earth, while each age prepares for the coming of another better than itself." Now, such advance or progress implies an ideal goal foreseen and selected, and thus indicates the existence and operation of a Supreme Mind (See p. 132). The doctrine of evolution, instead of being inconsistent with teleology, rather supports it.

Take, again, the science of Biology. This science alone furnishes so much evidence in support of the teleological view that many theists have based their argument exclusively on the data or materials supplied by it. The characters and relationships of organic forms constitute a proof of the existence of a Supreme Mind, whether their genera and species be the immediate and immutable expressions of the ideas of that mind, or the slowly reached results of evolution. It is a well-known fact that extremely complex adaptations of means to ends, and of lower ends to higher ones, are needed for the production and support of life. The most elementary protoplasmic cell (with which life

begins, so far as we know) is an inconceivably complex system of co-ordinated atoms and molecules, subject to the control of the whole over the parts. The lowest living organisms are *unicellular;* but the higher ones are *multicellular*—*i.e.*—they are made up of a large number of cells and materials derived from cells, all admirably co-ordinated and performing various functions. So wonderfully are the different organs* of a living body constructed, and so perfectly are they adjusted to their respective functions that a thoughtful mind finds in them the clearest indications of the existence and operation of a designing intelligence. How remarkable are the co-ordinations that subsist between the organs of a living organism and the extra-organic world!† How curious are the instinctive activities displayed by animals in seeking

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* *e.g.*, the sense-organs like eyes, ears, &c., the vital organs like the heart, lungs and stomach, and the organs of locomotion—fins for swimming, legs for walking, wings for flying.

† A still more remarkable instance of combination or co-ordination is found in the adaptation that subsists between one living being and another—*e.g.*, that between the new-born mammal and its mother for sucking and giving suck. "That among the mammalia the offspring should be able to take the nourishment which the mother is made ready to give, a special muscular aptitude, by no means an easy one (that of *sucking*), is indispensable; and it is there, as soon as the first trial comes. The instinctive art in one being finds the conditions of its use in another." (Dr. Martineau). It may seem at the first sight that in the case of some mammalia like whales that live in water, the adjustment between the mother and the new-born offspring must fail, for the act of sucking is pneumatic and can be performed only in air. But with the new-born whale the difficulty is only apparent and not real, for, "in the mother the mammary gland is surrounded by a muscular apparatus which, by compressing the reservoir of milk, ejects the fluid into the applied mouth and thus dispenses with the action of the young creature."

In the above instance, the co-ordination or adaptation subsists between two individuals of the same species. But it often subsists between living creatures belonging to two distinct and even remote provinces of organic Nature. Thus, many kinds of plants depend for their fertilisation upon insects. Such plants are fertilised by pollen

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food, in defending themselves and attacking their enemies, in the construction of dwellings, and in making provisions for the young!* How complicated and refined, again, are the adjustments of the body to the mind and of the mind to the body! Indeed, throughout Nature, whether organic or inorganic, we find evidences of selection, combination and gradation. We are thus led to the conclusion that the world is the product of a Supreme Intelligence, and not of blind physical forces.

§ 2. Review of anti-theistic arguments

Attempts have been made by some to prove that the world is the product, not of a rational mind, but of blind physical forces. They argue that the advocates of Teleological Theism base their conclusion on a number of selected cases occurring here and there, and on insufficient consideration even of these, while they entirely ignore the facts of an opposite character. Thus, a complaint is made by them of many defective, useless and meaningless arrangements in Nature which would appear to be the results rather of physical forces working blindly than of rational design. In the inorganic as well as in the organic world, faults have been freely pointed out by critics from the time of Empedocles to that of Laplace, Comte and Mill. Thus, it has been remarked by some that "the elements and members of the solar system have not been disposed in the most advantageous manner. The moon, in particular, should have been so placed that it would revolve round the earth in the same time that the earth revolved round the sun. In that case, she would appear every night, and always at the full." Then, on earth there are the uninhabitable polar and tropical regions, deserts, mountains, oceans, earthquakes, volcanoes and hurricanes.

In like manner organic nature has also been made an object of severe criticism. Thus, it has been pointed out that there are some organs which, though fully developed, are apparently useless. It has also been remarked that there are many 'rudimentary organs'—*i.e.*—organs of which the forms are given without any capacity of performing the functions or which are so imperfectly developed as to be incapable of performing any serviceable function. Complaint has also been made of some hurtful adaptations.

Now, it is argued by the anti-theistic writers that, since there are so many defects in the world, it is not the product of a rational mind, but of impersonal physical forces.

Critical remarks.

(i) The above anti-theistic argument is quite illogical. We have already seen that there are innumerable facts in the world-system which can be explained only on the supposition that the world as a whole is the product of a rational mind. Hence, even if it can be shown that there are some defects in the world, the atheistical conclusion that the world is the product of blind impersonal forces will not be proved. The utmost that can be said against the teleological argument of the theist is that it does not prove the omnipotence of the Divine Being or the infinity and perfection of His intelligence.*

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from other plants, and it is by the insects that the work of carrying pollen-dust is performed. The flowers of the plants are adapted in such a way that pollen-dust sticks to the bodies of insects when they alight upon them; and the colours of the plants or their leaves and flowers are so brilliant or dazzling that they attract the insects. The presence of honey also serves the same end. The insects, again, are so adapted that they can alight upon the plants.

* For a general account and examples of instinctive activities of lower animals, see Dr. Stephen's Psychology, third edition, pp. 501, 502. See also Janet's *Final Causes*, pp. 81-91, and pp. 255-259.

* As Dr. Flint remarks, "Although very considerable defects were clearly shown to exist in the constitution and arrangements of the physical world, there might yet be ample and unmistakable proof of the vast wisdom of its Author. Were it even true that science could show that the mechanism of the heavens, and the distribution of land and sea, heat and cold, on earth, were not in every respect the best, that would

(ii) But if the teleological argument does not exactly prove the infinity of Divine intelligence and power, it proves at least that they are so great that we cannot measure them and have no right to pronounce them limited. As Dr. Flint remarks, "The more Nature and mind and history are studied by any one who sees in them evidence of design at all, the more wondrous must the wisdom displayed in them be felt to be. Whoever realises that, that wisdom is at once guiding the countless hosts of heavenly bodies in all their evolutions through the boundless realms of space, and fashioning and providing for the countless hosts of microscopic creatures dwelling on the leaf of a flower or in a drop of water, everywhere accomplishing a multitude of ends by few and simple means, or effecting single and definite purposes by the most elaborate and complex contrivances, must feel that rash beyond all expression is the short-sighted mortal who can venture to affirm that it is not infinite." *(Ibid.)*

(iii) The opponents of Theism assert that there are considerable defects in the world. But is the statement logically justifiable? Are we sure that what appear to us to be defects or imperfections are really so? It is quite possible that there are reasons for these things which we know nothing about. In other words, they may serve ends wholly unknown to us—they may have their uses in the economy of the world as a whole. Our range of experience is narrow; our power of understanding is limited; we can survey only an insignificant fraction of this vast and manifold universe; and the little that we can perceive we can imperfectly comprehend. In the face of these facts, how can we dogmatically assert that what appears to us to be defective, useless or meaningless is really so? As we have already said more than once,

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not prove that there was no intelligence, no design whatever, involved therein." (*Theism*, pp. 235, 236). See also Dr. Martineau's *Study of Religion*, Vol. I, p. 330.

the universe is a unity in plurality—a single connected whole in which nothing is isolated or independent. Hence the precise significance of a particular part can be understood only in the light of the whole. If we could view all things *sub specie æternitatis*—if we could survey the entire universe and see how all its parts were related to one another and to the whole, then and then only we would be able to ascertain whether or not an apparent defect was a real one. We see, then, that the above anti-theistic criticism of the physical world is not a sound one.*

(iv) The above considerations enable us to answer all reasonings of this kind regarding organic nature also. But let us examine, in detail, the anti-theistic criticism of this department. And first we should consider the case of the so-called

(*a*) *useless organs.* It is asserted that there are some organs which are quite useless, *i.e.*, which do not perform any function at all. Now, in reply to this, we may say that it is true that there are a few organs of which the functions are unknown; but because we do not know their functions, we must not conclude that they have none. In other words, an organ is not to be regarded as useless, because its uses have not yet been found out. At one time the uses of many organs were unknown; but now they have been discovered; and it is expected that the functions of the remaining few will, in course of time, be brought to light. The mere fact that the use of an organ is unknown does not justify us in condemning it as altogether useless.*

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* Cf. Dr. Flint's *Theism*:—"All nature is one great whole, and each thing in it has a multitude of uses and relations, with reference to all of which it must be viewed in order that a complete and definitive judgment regarding it may be formed. . . . In regard to the moon, it would seem that, even if that luminary were intended to serve no other purpose than to give light on earth, it is not the Maker of it who has blundered, but Comte and Laplace. The real consequences of their pretended improvement have been shown to be that the moon would give sixteen times less light than it does, and be in constant danger of extinction. . . . But they were not entitled to assume that the moon was meant merely to be a lamp to the inhabitants of the earth. To give light on earth is a use of the moon, but it is foolish to imagine that this is its sole use. It serves other known ends, such as raising the tides, and may serve many ends wholly unknown to us. So in regard to volcanoes, earthquakes, &c. Any single generation of men and beasts might well dispense, perhaps, with their existence, and yet they may be most appropriate instrumentalities for securing order and welfare in the economy of the universe as a whole."

(*b*) Let us next consider the case of *rudimentary organs*. Here are some of the examples : "The embryo whale carries teeth in the upper jaw, though, when grown, he 'has not a tooth in his head,' and even in embryonic birds, traces of teeth are said to be observ-

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* Prof. Janet points out that "such organs are few in number in the present state of science. Almost all known organs have their proper functions; only a few oppose this law. The chief of these organs in the higher animals is the *spleen*. It seems, in effect, that this organ does not play a very important part in the animal economy, for numerous experiments prove that it can be extirpated without seriously endangering the life of the animal. We must not, however, conclude from this that the spleen has no functions; and physiologists do not draw this conclusion from it, for they are seeking them, and are not without hope of finding them. An organ may be of service without being absolutely necessary to life. Everything leads to the belief that the spleen is only a secondary organ; but the existence of subordinate, auxiliary or subsidiary organs involves nothing contrary to the doctrine of finality." (*Final Causes*, p. 149).

Cf. Dr. Martineau's *Study of Religion*, Vol. I, pp. 334-335 :—"That the functions of the spleen and of the lymphatic glands are unknown, does but leave these organs in the position once occupied by the auricles and ventricles of the heart, the pulmonary arteries and veins, the afferent and efferent nerves; and does not prejudice the expectation of physiologists that an office will yet be discovered for them: That the spleen can be removed without perceptibly impairing the powers of life certainly indicates that it has no primary function in the animal economy; but the same may be said of the pancreas, which Nature omits till she arrives at the cephalopoda, and which may also be removed without material injury, yet which is acknowledged to be a serviceable partner in the process of digestion. Neither our ignorance of any organ, nor its subordinate duty, warrants our condemnation of it as good for nothing."

able. Numerous insects that never fly have a pretence of wings. The muscle under the skin, by the twitching of which a horse throws off a fly, is traceable also in man, though he has not the power to use it." Again, "A woman bears on her bosom the two breasts destined to nourish the new-born child; in man, the breasts are not developed, but the two nipples exist."

Now, two explanations of such facts have been suggested by scientists, *viz.*, (1) the theory of the atrophy of organs by disuse, want of exercise or default of habit; and (2) the theory of the unity of type. The first has been suggested by evolutionists; the second by Geoffray Saint Hilaire. But neither of them is inconsistent with the theory of finality or teleology. Let us take the first explanation. As Prof. Janet observes, "If organs have ceased to serve, and have thereby been reduced to a minimum which is now only the remains of a previous state, it does not follow that they cannot have been of use at a former time; and nothing conforms more to the theory of finality than the gradual disappearance of useless complications." (*Final Causes*).

The second explanation also can be equally reconciled with our doctrine; for "the type remaining the same, one can understand that Nature, whether by amplifying it, by inverting it, or by changing its proportions, variously adapts it according to different circumstances, and that the organs, in these circumstances rendered useless, are now only a souvenir of the primitive plan."*

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* Such facts have been very admirably explained by Dr. Martineau in his *Study of Religion*, Vol. I, pp. 335-337. He says, "So long as we shut ourselves up with the individual and his wants, and estimate his build by reference to this alone, it may perplex us to meet with parts which he cannot use. But Nature, far from being utilitarian only, is ideal too; and in setting up each single life takes but one step of a long history, and pursues an old type into new and modified exempli-

(*c*) Finally, we should consider the case of *positively hurtful organs*. These are very few in number. The typical example is the sting of the bee or the wasp. It is said that the sting of the wasp or the bee is an organ which cannot be applied to the use for which it seems adapted without injuring the creature, for it is a toothed instrument such that when thrust into an enemy's body, it sticks there and is torn from the bee or the wasp, thus causing its death. To this objection the reply may be given that it is not universally true that the bee or the wasp by using its sting necessarily causes its own death. It is true only in particular cases, *e.g.*, when the insect removes too precipitately and human beings or large domestic animals are

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fications. . . . The great problem of animal existence is to maintain in equilibrium, under every change, the relations between the organism and the surrounding medium. This might be done, no doubt, by absolutely cancelling an organ, when the want of it ceases, and by setting up an original invention to meet a new-born need. But it may also be done by simply leaving the superseded provision undeveloped and unapplied, and turning some existing organ, rendered adequately flexible, to larger account. The former method advances through natural history *per saltum*, abolishing, as it goes, the vestiges of affinity between step and step. . . . The latter, by moving *gradatim*, never drops the clue of orderly genesis. . . . It is impossible to deny the superiority of the latter; and it is secured by the rule, that through use an organ shall be developed, through disuse shall be atrophied. . . . The dormant organs, called rudimentary, though not serviceable to the individual, are *remnants* of a related type, and constitute a *record* of great importance, for reading the method of Nature. Without these finger-posts, the branching and crossing roads of evolution, so skilfully tracked by Darwin, would have been vastly more obscure, and the survey of the organic kingdom would have lain in its elementary fragments still."

Cf. also Dr. Flint's *Theism*, p. 242 :—"To the extent that evolutionism is true, rudimentary and obsolete organs can be accounted for, and the wisdom displayed in them amply vindicated. . . . They can be explained on the theory of types. They are stages in the realisation of the Divine conception; indications of an order which comprehends and conditions the law of use and contrivance for use; keys to the understanding of the Divine plan."

the objects of its attack; for it is very difficult to extricate the jagged hair-like needles which compose the sting from their thick feathery skin; but even in these cases it can be often drawn out with safety. But the sting of the creatures is generally used, not against such gigantic enemies, but against the foes of their own household; and there its use is quite harmless. Thus, though in particular cases, the sting may bring about the death of the insect, yet, generally speaking, it is an instrument of defence and attack. It has other uses, *e.g.*, it is an instrument for cutting grooves in wood.

We conclude, then, that there is no reason why the world should not be regarded as the product of one supreme rational power. Modern science is tending more and more towards the view that the world is a single organic whole or unitary system, and is the expression of a single rational power immanent in it. But if this is so, there must be a supreme end for the sake of which the world exists. What, then, is the ultimate end? No adequate definition can be given of that end. But we can understand it thus far : since the supreme intelligence is an absolute being having everything within itself, its end can be nothing more than the expression and realisation of itself as an absolute concrete self-conscious power. It is for the sake of this end that all finite things and minds exist. Consistently with this view, "whatever is, is rational". (See pp. 145-146).

NOTE I.

ULTIMATE CAUSALITY AND END.

This question has already been discussed in a general way. We may make here some additional remarks.

We may begin by considering Aristotle's conception of cause. He distinguishes four kinds of causes :—

(*a*) The *material* cause of a thing. By this is meant the substance, stuff or material of which the thing is made or composed.

(*b*) The *formal* cause is the form which is imposed on the materials for the realisation of the intended purpose. It implies the scheme or design by which a result is produced.

(*c*) The *efficient* cause implies the working cause—the energy, force or power which imposes the form on the materials and thereby produces the intended result.

(*d*) The *final* cause implies the *end, use, purpose* or *reason* for which it is produced—*i.e.*—for which the efficient cause imposes the particular form on the material. The use, purpose or end (finis) is the ultimate reason for the production of a thing. In other words, the ultimate cause of a thing is the reason which leads to its production.

Thus, in the case of a building, bricks, mortar &c. constitute the material cause ; the plan of construction or the form imposed on the materials is the formal cause ; the energy of the masons is the efficient cause ; and the construction of the building or, perhaps, the end or purpose or reason for which the building is constructed is the final cause.

The above distinction may be utilised in explaining the changes of Nature.

A change implies the passing of an object from one condition into another. Now, the changes of the world are not random, aimless changes, but are changes towards definite results, and are regular, orderly and systematic. It follows from this that they have their origin in a mental power working out or realising an end ; this end, purpose or reason may be called the final cause of the world. What, then, is the nature or character of this end ?

As we have already said, it is, the self-manifestation and self-realisation of God. Thus it may be said that all finite beings with all their changes exist for the sake of this ultimate end, *viz.*, the self-realisation of God as a concrete spiritual power or absolute self-conscious spirit. The Divine end is always realised, but, being infinite, it is never exhausted in time.

NOTE II.

GROUNDS OF BELIEF IN GOD.

(Proofs of the Existence of God.)

Attempts have been made by Theistic writers to prove the existence of God by means of arguments. A brief sketch of these is given below.

I. *The Causal Arguments.*

(*a*) *The Common form.*

As commonly stated, the argument consists in arguing from the nature of the world as an effect to the existence of God as the first or supreme cause. The existence of the world as a system of effects and causes which are themselves effects of previous causes implies an ultimate cause which is not caused by anything else—*i.e.*—an absolute, self-existent, uncaused primary cause. In other words, the world is a system of effects ; and these effects have causes. But these causes, again, are effects of other causes, and so on. Thus we are led backwards from effects to causes. But an infinite regress of finite beings related as causes and effects is unthinkable. We cannot go on through an infinite series of causes and effects. We must, therefore, stop at a point and suppose the existence of an uncaused first cause ; and this is God.

This argument is sometimes called the *cosmological argument* or argument from the contingency of the cosmos. It assumes three forms. Thus it may be put as an argument (i) from the world viewed as an effect to a First Cause (as explained above) ; (ii) from the world viewed as phenomenal to one ultimate substance, and (iii) from the world viewed as finite and relative to an infinite and absolute being on whom it rests.

(*b*) *Dr. Flint's Causal Argument.*

Whatever has begun to be must have had an antecedent ground or cause which accounts for it. We do not assume that every existence has a cause. What we assume is the self-evident principle that every existence, once new, every event or occurrence or change, must have a cause. This is a principle which human thought instinctively assumes as true every moment. All our reasonings, all our proofs, are based upon certain fundamental principles which we intuitively apprehend as true; and the Law of Causality is one of them. But, if every event—every new existence or a change in some existence—must have a cause, then, in order to prove that the universe must have a cause, we must first show that the things composing it had a beginning or commencement in time. Now, an examination of the world of our experience reveals that all the things which are seen are temporal—that every object in the universe which presents itself to the senses has had a beginning—that "the most powerful, penetrating and delicate instruments devised to assist our senses reach no cause which is not obviously an effect. The progress of science has completely and convincingly established that everything of which our senses inform us has had a commencement in time, and is of a compound, derivative and dependent nature." Hence we may most reasonably argue from the existence of the world as an effect to the existence of an uncaused First Cause. The latest speculations regarding the nature of matter are consistent with this view, and even tend to prove that the First Cause is a mental power. (See pp. 109, 110). An infinite regress of causes and effects is unthinkable or inconceivable. It is an absurd notion. Indeed, an uncaused cause, a first cause, alone answers truly to the idea of a cause. A secondary cause, in so far as secondary, in so far as caused, is not strictly a cause. A true cause is one to which the reason not only moves, but in which it rests, and except in a first cause the mind cannot rest. So far as secondary, a cause merely transmits to its consequent what it has received from its antecedent. A first cause, then, is the true cause; all others—those that are called the secondary ones—merely convey and communicate its force. All other powers are derived from its power; all the powers which are distinguished and distributed in secondary causes must be combined and united in the first cause. The first cause, it is

needless to add, must be *one*. Reason and observation alike lead to this view. Science reveals that the universe is a unity in plurality—a single whole; whence it follows that the cause of it cannot be more than one, and the orderly and harmonious constitution of the universe indicates that it is a rational power. But at this point we have been unconsciously led to what is called the Teleological Argument.

(c) *Dr. Martineau's Causal Argument.*

The older causal or cosmological argument is tacitly assumed rather than stated by Martineau who substitutes for it a theistic argument based on an analysis and examination of the nature of causality. He begins his argument with a discussion of the essence of the idea of cause. He points out that our full idea of causality involves the notions of substantiality, power, efficiency, force or energy, production and necessary connection between cause and effect; and all these ideas we derive as self-conscious beings from within. We are clearly conscious of ourselves as causes or agents, and of causality as an inherent attribute of ourselves. Every time that we put forth voluntary effort to control and concentrate our thought or to produce bodily movements and thereby to occasion changes in the outer world, we are clearly conscious of ourselves as exercising causal energy and of the connection between our energy and the effect produced; and having got the idea of causality in this way, we extend it by analogy to Nature. Indeed, at this point we may advance a step further and say that not only all the elements of the idea of causality are derived from a self-conscious mind, but also that all causality in Nature is mental and that a self-conscious mind is the only possible ultimate cause. Causation presupposes not only the existence of energy, but also its direction or regulation. Now, a self-conscious mind is the only thing which can direct or regulate energy in a definite direction so as to produce a definite result. Blind, random energy (if such a thing were possible at all) would produce no definite system of effects. As Mr. Armstrong remarks when commenting on the view of Martineau, "In one revealing flash, I become aware of my Will as a conscious putter forth of force, and of some other being as putting forth force against me ; and I recognise that other as also Will, as I am Will." (*Agnosticism and Theism*, p. 187).

Indeed, Idealistic thinkers in general argue much in the same way in explaining the causality in Nature. According to them, we get the idea of causality from our own selves when exercising our own will-power or energy for the realisation of ends or ideas ; and we must conclude by analogy and inference that all the causality in Nature is the putting forth of energy for the realisation of ends—that the evolution of the world is the self-realisation of absolute idea.

II. *Teleological Argument*. It consists in arguing from the evidences, marks, signs or indications of wisdom, intelligence, design or purpose contained in the world as an effect to the existence of a supreme rational mind viewed as the cause of the world. It is the most convincing of all arguments for the existence of God, and hence theistic writers generally devote the greater portions of their works to it. Much has already been said about this argument in the present treatise (See pp. 149-150 ; also pp. 289-300). The world displays such perfect order, harmony and regularity and contains so many instances of adaptation of things as means to definite results or ends that we are constrained to believe in the existence and operation of a Supreme Intelligence. Even thinkers like J. S. Mill and Kant spoke of this argument with respect, though the latter criticised it. Dr. Martineau remarks that *selection, combination* or *co-ordination* and *gradation* are the three marks, signs or criteria by which the products of a rational mind may be recognised. An intelligent being *selects* his means, *combines* together those means that will help each other, and takes successive *steps* or advances by *gradations* towards the end in view. By gradation of ends, we mean that ends or results are made the means to higher ends, and these towards still higher ends, and so on. Now, in Nature we find innumerable facts which may be regarded as evidences of selection, combination and gradation. Hence the cause or author of Nature is an intelligent being.

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III. *Moral Arguments*.

(*a*) *Kant's argument*. According to Kant, the existence of God is a postulate of our moral consciousness. Our moral consciousness demands that there should be perfect coincidence between virtue and happiness. In other words, our conscience gives us the conviction that virtue should lead to happiness and vice to pain. But it is a fact of experience that the coincidence between virtue and happiness and that between vice and pain are rarely met with in the present life. Hence we have to postulate that there is a Supreme Being—a moral governor of the world—who will reward the virtuous with happiness and punish the vicious in their future lives. (See the author's *Principles of Ethics*, pp. 24, 25; see also Kant's *Critique of Practical Reason*).

(*b*) *Martineau's Moral Arguments*.

He gives us two arguments :

(i) From the consciousness of obligation and responsibility to the existence of God as the moral governor and ultimate judge to whom all our obligations are ultimately due and to whom we are responsible even for our most secret thoughts and actions ; (ii) from the ideal of perfection present in our minds to the existence of a perfect being in whom the ideal has been realised. (See the author's *Principles of Ethics*, pp. 25, 26. See also Martineau's *Types of Ethical Theory* and *Study of Religion*, Vol. II).

IV. *Ontological Argument*.

It consists essentially in arguing from the idea of God within our minds to the ontological reality or existence of God—assuming that the idea of God is such as to prove its own objective truth. The argument has assumed several forms. Anselm gave it the following form : We have in our minds the idea of an infinite, absolute, all-perfect or most real being, and this idea carries with it its own objective truth, because (i) existence is an essential element of perfection ; (ii) if such a being did not exist, we would be able to conceive of another who does exist, and who would, therefore, be more perfect. Descartes substantially repeated this apparently curious argument, and added another, *viz.*, that from effect to cause. We have in our minds the idea of an infinitely perfect being, and as there is nothing in the world of finite beings which is adequate to produce the idea, it must be regarded as implying the objective existence of an infinitely perfect being who is its author and inspirer.

Kant rejects the ontological argument. He says that the mere idea of the existence of a thing does not prove its existence. The idea of a hundred dollars in the pocket does not prove the existence of the sum there. But Hegel and many others suppose that this criticism of Kant is not sound. There must be a point in thought where thought carries its own objective certainty. There is at least one reality whose existence is proved by the mere idea of it without experience. The very thought of a world of finite and relative things carries with it necessarily the thought of an infinite and absolute being ; and this idea carries with it the certainty of its own truth. There is this amount of truth in the ontological argument. (Cf. Spencer's view, pp. 87, 88). Dr. J. Caird, too, as a Hegelian, accepts the ontological argument. He says that, in thinking of self and the not-self clearly, we rise to a universal point of view—to the conception of an all-embracing thought which includes both of them—which covers the whole sphere of thought and existence ; and this conception corresponds to reality. As we cannot think of 'being' except as contained in universal thought, so 'being' cannot exist except as contained in such thought, so that thinking and being are ultimately identical. (See Dr. Caird's *Philosophy of Religion*, pp. 144-150.)

Dr. Flint presents the argument in this form : We are conscious of having ideas or intuitions of infinity, absoluteness, eternity, necessary existence and perfection. We may dispute as to whence and how we have got them, but we cannot deny that we possess them. But if we undoubtedly possess these ideas, we feel that they must, unless they are wholly delusive—which is what we are unable to conceive—be predicable of some being. Now, they cannot be predicated of the world or any being contained in it ; they must be predicable of one who has been proved by the causal, teleological and moral arguments to be possessed of so much power, wisdom and goodness that we cannot measure them and have no right to pronounce them limited (See p. 296).

We have given above a general account of the main arguments for the existence of God (commonly called proofs of the existence of God or grounds of belief in Him). Some other grounds are sometimes added, *e.g.*, consensus or universal consent, intuition, criticism of knowledge. A brief account is given below.

V. *Consensus* (*Argument from universal consent*). Some suppose that the universality of a belief proves it to be true. They say that men universally and instinctively believe in the existence of God, immortality of soul, difference of right and wrong &c., and therefore these must be objectively valid. (This is often combined with the theory of intuition).

Now, though an appeal is made in this way to 'universal consent', there are few ideas and beliefs that are universally assented to. All known races have some idea of God or gods, but how much is there in common ? As Dr. J. Caird remarks, "it is only by thinning down the idea of God to an abstraction which would embrace under a common head the rudest fetishism and the spiritual theism of Christianity that a 'consensus gentium' can be alleged on behalf of the fundamental idea of religion." (*Philosophy of Religion*, pp. 54, 55).

But though a consideration of the religious ideas and beliefs of different races does not establish the truth of our highest religious conceptions, still such a consideration establishes one fact of supreme importance, *viz.*, the fact that religion is universal and is deeply engrained in human nature. In other words, it proves that man's mental constitution is such that, in the presence of the facts of life, mind and Nature, religion necessarily appears. It is also a fact that the trend of human thought is towards the monotheistic or panentheistic conception of God. This tends to prove that such a conception alone satisfies the demands of human reason, heart and conscience in which religion originates.

VI. *Intuition, instinctive feeling, revelation, faith.* According to some, we can intuitively know God, and so we believe in

Him, even though we may be unable to prove His existence logically. This has been held not only by many mystics and pious men, but also by a class of philosophers. Indeed, in recent times we find something like an anti-intellectualist movement and a tendency to magnify the importance of intuition and instinctive feelings and convictions. Many assert that "the heart has reasons which the intellect knows not of." We have instinctive feelings and convictions that certain things are true (*e.g.*, those that are required to satisfy our religious and moral needs and aspirations), and these feelings and convictions are more to be trusted than logical reasoning. Many profoundly thoughtful men believe that "intuition is an undeniable fact of human life and experiences." (See Prof. Binoyendra Sen's 'Intellectual Ideal,' pp. 27-30, and Armstrong's 'God and Soul,' Ch. IV). Some suppose that God reveals His nature to man through the medium of inspired individuals. (See p. 92). In this connection it may be mentioned that many mystical thinkers, in the East as well as in the West, in India as well as in Europe, have maintained that man may acquire the power of rising above the limitations which produce sense-consciousness and of becoming directly conscious of himself as a free, self-evolving creative power, identical with, or as an organ of, the Absolute.

(Cf. the view of Hindu *Yogis*. Cf. also the Christian doctrine of faith and the Hindu doctrine of 'ভক্তিবাদ or বিশ্বাস'. St. Paul says, "Through faith we understand that the heavens and the earth were made by God"; and Chaitanya says, "ভক্তিতে (বিশ্বাসে) মিলয়ে হরি, তর্কে বহুদূর", *i.e.*, God can be known through faith; it is extremely difficult to ascertain His nature by means of logical reasoning. Many Indian savants have held "अचिन्त्याः खलु ये भावाः न तांस्तर्केण योजयेत्", *i.e.*, those things which are incomprehensible should not be made objects of logical discussion and discursive reasoning. They say that revelation, inspiration or intuition gives us knowledge of those things. Quite recently, Ramkrishna Paramahansa of this country advocated the doctrines of revelation and faith, though he believed also in the possibility of knowing God in other ways. It may be added here that the doctrine of special revelation is accepted not only by the Hindus, but also by the Jews, the Christians, the Parsees etc.).

VII. *Criticism of experience or knowledge.*

Epistemological considerations also lead to the theistic conception of God (See pp. 22-24).

VIII. *Pragmatic or practical considerations.*

According to some, 'workableness' or serviceability is a test of truth. It is said that, if our belief in something is in keeping with the practical requirements of life—if it makes us stronger, happier and better in all respects, then it is true. Now, if this be a correct view, then we may say that our higher religious and moral conceptions must be true, as they work best in practice.

NOTE III.

MORAL GOVERNMENT AND PROVIDENCE: PROBLEM OF EVIL.

It is generally held by Theistic writers that the world is subject to a moral government and providence. By this they mean that "there is a superior power which takes into account the moral qualities of actions and characters, and which controls the operations of nature and developments of human society in such a way as to ensure the ultimate triumph of righteousness over iniquity, and promote the development of moral character—such government as will make the world to be a sphere of moral probation and culture, in which character is made possible, developed, tested and strengthened." In other words, they assert that the Divine being who is the author and sustainer of the world is at the same time its moral governor, and that He is at once the wisest and the holiest—the supremely good as well as the supremely powerful being.

But here a new question arises: How are we to explain the existence of evil in the world consistently with the above form of Theistic philosophy? In other words, how are we to reconcile the existence of evil with the wisdom, goodness and unlimited power of God? Now, evil is of two kinds: moral and natural.

(See the author's *Principles of Ethics*, Ch. IV). Let us consider them separately.

I. The Theistic explanation of moral evil or sin is that it is a consequence of the power of self-determination with which finite rational beings have been endowed. God has given men the power of distinguishing right from wrong and of freely choosing one of them. In some cases they freely choose what is wrong. Thus moral evil arises in the world. God has not created moral evil or sin; it is due to the fault of men. "When God created moral beings, and these beings, in the free exercise of their power, violated His law, sin entered into the world, but not through His will. It resulted from the exercise of an original good gift which He had bestowed on certain of His creatures, who could abuse that gift, but were not necessitated to abuse it. Their abuse of it was their own action, and the action consisted not in conforming to, but in contravening, God's will. Thus, God's character is not stained by the sins which His creatures have committed."

We see, then, that the existence of sin or moral evil is not at all inconsistent with the moral government and goodness of God; for it is a consequence of the free will which God has conferred on finite minds. Indeed, if the world is to be a field for moral training and development, it must give opportunities for both good and evil. If the power and liberty of doing evil as well as what is good were taken away by God, man would be brought down to the level of lower animals and inanimate machines; he would then be perfect only in the sense in which an automaton is perfect. It may be added in this connection that the occasional success of the wicked and the difficulties in the way of the virtuous are essential to the state of moral probation, training and development. It may finally be remarked that an impartial and careful study of the history of mankind reveals the presence of a providential force making good rise out of evil and moulding human events towards a good end.

II. But how are we to explain natural or physical evil? The general answer is that things appear to us to be evil and imperfect because of our limited and imperfect comprehension

of them—*i.e.*—because we cannot see their causes, connections, meanings and purposes. If we could take a comprehensive view of the entire system of things and interpret every individual event by reference to the whole, we would find that "whatever is, is rational"—that everything is right and good in its own place in the system or in the economy of the whole. In other words, if we could consider the entire cosmos *sub specie æternitatis*, we would find that the so-called evils and imperfections were necessary parts of one eternally evolving system. (See pp. 288-289; also pp. 296, 297).

Since the universe is a single whole, we have no right to judge of any particular part of it or any phenomenon occurring in it without reference to the whole. What appears evil to us may be good when viewed from a higher standpoint or from the standpoint of the whole.

The problem of evil has been fully discussed in the treatises on Natural Theology, such as Dr. Martineau's 'Study of Religion' and Dr. Flint's 'Theism'. It may be added here that a large amount of physical pain and mental suffering may be explained partly as a result of moral evil and partly as a provision for moral discipline. It may also be remarked that "a uniform system of natural laws imposing hardship and suffering on animals and men is necessary as a means for drawing forth the powers inherent in the mind, thereby making mental development possible." Pain, as Dr. Flint remarks, has a preservative use. Were animals unsusceptible of pain, they would be in continual peril. It also tends to the perfection of animals.

CHAPTER XXIV.

FREE WILL AND NECESSITY.

The question as to the nature of human will has been the subject of a long controversy. Some have maintained the doctrine of freedom of will, while others have gone so far as to suppose that "will, in all its operations, is subject to the same necessity which binds the physical effect to the physical cause. 'Free Will' and 'Necessity' have been party war cries for generations."*

The real question at issue is this: Does the self in some way determine its own volitions without being itself determined to do so by anything else? If so, then human will is free. Or, are human volitions determined by motives and circumstances acting from without? To state it differently: Is there something that determines a man to will what he wills, so that he could not do otherwise? Is his willing or not willing a thing dependent on antecedent circumstances, and these on others, and so on, like physical events? Is his willing caused by something outside himself over which he has no control, or by something in his own nature which is beyond his control, or by both combined, so that his act of will is determined as rigidly as the flow of water or the fall of stones? If so, he is subject to necessity as commonly understood.

The problem of Free Will and Necessity, though a psychological and metaphysical one, has also an ethical significance. As D'Arcy says, "If the freedom of the will in every sense be given up and Necessity prove victorious, the ethical 'ought' is left without meaning and morality becomes a polite fiction." (*A*

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* D'Arcy: *A Short Study of Ethics*, p. 22.

Short Study of Ethics, p. 22). In fact, the conception of the freedom of the will, alien as it may be to positive science, is indispensable to Ethics and Jurisprudence; since in judging that I 'ought' to do anything, I imply that I 'can' do it, and similarly in praising or blaming the actions of others, I imply that they 'could' have acted otherwise. If a man's actions are mere links in a chain of causation which, as we trace it back, ultimately carries us to events anterior to his personal existence, he cannot really have either merit or demerit; and if he has not merit or demerit, it is repugnant to the common moral sense of mankind to reward or punish—even to praise or blame —him.

Now, it is not possible to deal adequately with the problem of Free Will and Necessity in an elementary philosophical treatise like the present one. A brief account of the controversy is given below:

I. *Necessitarianism* or *Determinism* is the theory that acts of will or volitions are determined by antecedent circumstances, and these by earlier ones, and so on. The principle of causation—that one event is caused by another, and that by another, and so on in an unbroken chain of causes and effects—applies to human volitions, just in the same sense as to physical events. Hence, if all the circumstances were known, the future actions of men could be predicted as infallibly as the movements of the planets and the eclipses of the sun and the moon—being determined by antecedent events in just the same sense.

Now, the antecedent forces directly determining a person's volitions are his *motives*, *desires* or *impulses*, and these, again, depend on prior circumstances. There is no voluntary action that does not spring from a motive or desire of some object. When there is but one motive or desire present, then that motive determines the action. When several motives are present simultaneously, then there is a conflict among them, and the strongest prevails, represses the rest for the time being, and determines the volition of the moment.

In other words, volition is always determined by the strongest motive or desire present at the moment. Volition is, in fact, nothing but the strongest desire or impulse of the moment asserting its supremacy over weaker ones and working itself out into action.

What, then, determines the comparative strength of desires or motives and thereby determines volition?

The strength of desires or motives is determined by antecedent circumstances. It is determined

(1) partly by the outward circumstances in which the individual is placed and the states and wants of the organism;

(2) and partly by the mental character and constitution of the individual, which, again, is determined (i) partly by inheritance from previous generations, and (ii) partly by the circumstances under which the individual has been brought up.

And these conditions, it will be seen, are such as the individual did not himself make, and are determined again by earlier conditions, and these by still earlier ones, and so on indefinitely. Thus every act of volition may be said to be a focus in which many forces meet and combine to produce a *resultant*, and this resultant is the act of volition, so that the volition is determined by antecedent forces as much as any physical event is. J. S. Mill, who is a typical determinist,* says that the causes or antecedents determining volitions are "desires, aversions, habits and dispositions, combined with outward circumstances

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* See Mill's Logic, Book VI, Ch. II, and 'Examination of Hamilton', Ch. XXVI

suited to call those incentives into action. All these, again, are effects of causes, those of them which are mental being consequences of education and of other moral and physical influences." (Mill's *Examination of Hamilton's Philosophy*, p. 561).

The doctrine of Necessity or Determinism is explained by D'Arcy in the following words :—"The Determinist holds that in every case volition is determined by the strongest motive. In most cases the man yields at once, because there is just one motive influencing him at the time. But sometimes there is a conflict. Opposing motives meet in his mind, and whichever motive is strongest prevails and, consequently, determines the action. But, in no case, according to this theory, can the man be said to be self-determined. The mind is regarded as a field whereon motives of many sorts contend and decide. Action always follows, and must follow, the strongest motive; just as the physical effect always follows, and must follow, the physical cause. The Determinist goes further still and refers all motives to facts and events which he regards as independent of the will. He makes the decisions of the self arise ultimately by physical causation out of the not-self. Motives, according to this theory, originate from the interaction of character and circumstances. Any one who knew a man's character and circumstances accurately, could foretell his conduct with unerring precision. Character alters, of course, during life, but it alters according to necessary laws. It must be traced ultimately to circumstances, the constitution of the man's bodily organism, the things and events he has seen and experienced, and certain mental predispositions which are his by heredity."*

It may be pointed out in this connection that Sensationism, Materialism and Pantheism all lead to the doctrine of Necessity or Determinism. According to Sensationism, mind is merely the aggregate of conscious states and processes—ideas, feelings and desires. Consistently with this view, volition must be regarded as consisting in the automatic process by which one motive or desire asserts its superior strength over its rivals in the conflict of motives or desires and thereby works itself out to the exclusion of the rest; and the strength of the dominant desire is determined by antecedent circumstances, which, again, are determined by earlier ones, and so on to infinity. The same conclusion follows from Materialism which recognises no substantial reality of mind and regards it as merely the series and sum of conscious states, and these conscious states as nothing but the inessential and accidental by-products of the motions and mutual resistances of the molecules of the organised matter which we call the brain. It is the physical or material forces of Nature, chemical, thermal, electrical, that do all the work of life and mind—mind being only the stream of consciousness, and consciousness being only a passive product of the friction of the physical forces, like light and heat. Thus mind is a passive product, and all its activities are determined from without, being nothing but the resultants of conflicting and combining forces, like the motions of a planet or a comet.

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* D'Arcy : *A Short Study of Ethics*, pp. 29-30.

Pantheism which is the extreme form of Monism also yields the same Necessitarian conclusion. According to Pantheism, there is but one self-existent reality, substance or power, and all the finite things and minds composing the world-system are but its self-transformations or modes without any individuality or independent causality of their own. It is evident that, from such a theory of the world identifying the finite mind with the Infinite Mind, Determinism or Necessitarianism must follow as a logical consequence.

Now, modern Determinists or Necessitarians, in defence of their view that every volition is made to be what it is by antecedent causes outside of itself, appeal—

(1) To Psychology of voluntary action—volition, they say, is determined by the strongest motive. (See pp. 315-317).

(2) To a naturalistic, materialistic or pantheistic theory of the world.

(3) To the axiom of causality—that every event must be determined by a cause, so that the cause being present, the effect must follow, and the cause being known, the effect can always be deduced and foreseen. This is a universal and necessary truth and admits of no exception. Now, it is argued that the "Liberty theory" would make the act of willing to be an event without a cause, whether in the nature of the agent or outside it—*i.e.*—it would make the act of volition an absolute beginning, an uncaused cause, which is inconceivable in a finite being.

(4) To the possibility of foreknowledge.

It is possible not only to predict future physical events, but also, to a great extent, the future actions of men. Now, the possibility of pre-vision implies pre-determination. Physical events like eclipses can be anticipated beforehand, only because they are determined by causes according to uniform laws, so that, knowing the causes, we can infer the events. Similarly, if voluntary actions of men can be foreseen, this can be only because they are determined by antecedent causes with the same uniformity as physical events, so that, when we know the antecedent circumstances, we can infer and foresee the actions.

And this is confirmed, among other ways, by statistics of marriages, crimes, suicides and other voluntary actions. The numbers are very nearly the same every year under the same circumstances—

just as much the same as non-voluntary and physical events, so that the one class of events seems to be determined by causes as much as the other.

And Theology tells us that God can foresee all the actions of men. This, too, implies pre-determination of human actions. God can foresee human actions, because He has determined them beforehand.

II. The Theory of *Free Will, Autonomy, Liberty* or *Self-determination* is the view that the self determines its own volitions from within itself, without being determined to do so by anything else.

The Libertarians or the advocates of the doctrine of free will argue rightly on their side that

(1) The Psychology of will on which Determinism is based is an erroneous one. A close examination of the facts of our inner life reveals that the strength of motives or desires depends essentially on the mind itself, and not on antecedent circumstances. It is the mind itself that determines the direction and strength of its own desires by the exercise of its own reason. It is true that mind is acted on by forces from without, producing impressions and exciting feelings and desires in it; but it is itself at the same time a centre of energy which reacts from within on the external influences. It is not wholly a passive product (as the other theory assumes), moved at random by forces acting on it from without, but is an active, rational principle which puts forth energy of its own to resist external forces and determines the direction of its own activities. Freedom of will manifests itself in free choice between alternative courses of action, guided by the rational judgment of the agent, and concentration of energy upon the chosen one.

(2) Freedom of will does not imply that volition is an event without a cause. The self itself causes it, and it does so freely without being determined to do so by anything outside itself. It determines its volitions according to reasons which lie within its own nature.

(3) The argument from foreknowledge is also misapplied by Necessitarians or Determinists. If different persons be placed in the same circumstances, their *wants* or *needs* will be very much the same. Hence also their *desires* or *motives* will be very much the same, because what is best for one will be best for the others.

Therefore, under the same circumstances, they will choose and act similarly, and yet there will be nothing in this contrary to free will. Men having the same motives or ends will act in the same way, and yet they will act freely. Thus the actions of even free agents can be foreseen and predicted, if their motives and circumstances be known. "That different persons act in the same way when they have the same reason for doing so, is not inconsistent with their acting freely."*

(4) The doctrine of freedom of will is supported by the Idealistic theory of the world and man's relation to it—which is the most correctly reasoned metaphysical theory. According to Idealistic Metaphysics, the human self is a finite reproduction or reduplication of the Absolute Mind which evolves the great world of nature. The self is thus *above Nature* in a sense instead of being its passive product. It shares in the productive, self-regulating power of the Absolute itself—in the ultimate self-determining power which produces and determines the series of

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* Theologians argue that Divine foreknowledge is not inconsistent with human liberty. Temporal succession, they say, is due to mere human limitation. To God time is 'one eternal Now', so that in His case the distinction of prior and posterior disappears altogether. He sees the future as present; He does not infer it from the past. Past, present and future are all present to Him intuitively. He thus foresees the actions of men without determining how they shall act.

CHAPTER XXV.

FUTURE LIFE AND ETERNITY.

We have considered above in a general way the nature of human soul and its relation to the physical organism and to God. We now proceed to enquire whether there are any grounds for believing in 'a future life' or immortality of the soul.

Now, it is easy to see that this question as to life beyond death is at once scientific and metaphysical and can be very briefly and inadequately discussed in an elementary treatise like the present one. We may here simply enquire whether the belief in a future life is supported by what we know of the nature of human soul or spirit, its relation to the physical organism and its position in the world-system.

What, then, do we know about the soul or self? We have seen that it is a self-conscious, self-determining and self-developing or self-realising reality, and not a mere passive product of material atoms and blind physical forces. It is essentially rational, active, synthetic and constructive—a centre of activity—which reacts on the external influences, transforms them into sensations, interprets or rationalises them by applying to them certain fundamental notions which it evolves from within, and thus builds up its conception of Nature or the material world. It can control, to some extent, the processes of Nature and make them subservient to its own ends. It controls the body or physical organism and uses it as its organ, medium or means of communication with the extra-organic world.* Thus, instead

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* All the physiological and metaphysical theories of the relation of body and mind except Materialism are consistent with the belief in a future life. But, as has been shown before, Materialism is not a valid theory.

of being a passive product or part of Nature, it is rather *above* Nature in a sense. It is, as we have seen before, cognate with the energy which evolves and supports the entire system of finite beings. The fact that man has the power of 'looking before and after'—of remembering the past, anticipating the future, conceiving the distant and understanding the inner causes and connections of things which are beyond the reach of sense—the fact that he seeks to know more and more of the world and has an innate tendency to sympathise and identify himself with his fellow-beings indicates that he is, in essence, above the limitations of space and time and is a reproduction of the universal power.

Now, if this be the true nature of the soul, there is no reason why it should not be regarded as immortal. As Dr. Stephen remarks, "It seems to follow that the soul is not dependent for its continued existence on particular conditions of time and space—on the outward series of physical phenomena—but can survive these outward phenomenal changes, and enter into new systems of relations in order to fulfil its function as a member of the system, and factor of the world-plan." (*Problems of Metaphysic*, 5th edition).

But let us consider the problem more adequately. Let us fully examine our present mental and moral constitutions and see whether the belief in a future life is justified by them. It will be seen presently that the very nature of our mental powers—intellectual, emotional and moral—implies the continuation of the soul beyond the present life.

1. *Nature of intellect.* The nature of our intellect seems to support the belief in a future life. The human mind begins with simple reaction against the surrounding forces of nature (its environment) which give rise to its sensations. But in the course of its development, it separates itself more and more from its immediate environment, rises above its present surroundings, so to speak, and lives more and more

in the world of thought, and not in sensation merely. As we have already remarked, the very fact that it gradually develops its powers of remembering the past, anticipating the future, conceiving the distant, and discerning the inner causes and relations of things beyond the reach of sense indicates that it is, in essence, above the limitations of space and time and is independent of the immediate conditions under which it works for the time being.

From what has been said above it is clear that the human mind, in proportion as it develops intellectually, transcends the limitations imposed by space and time, and thus leaves its finitude more and more behind it. This seems to indicate that it is destined for a sphere of existence extending far beyond the present life. Indeed, as we have seen above, the very nature of intelligence is to aspire to and strive after higher and higher spheres of knowledge; but the aspiration cannot be fully satisfied in the present life. This implies that the life of the rational soul must be prolonged into another sphere of being in which the aspiration will be satisfied. The rational nature of man is found to be in a process of evolution or development in this world; hence, if the soul is to attain its end or fulfil its function, the development must be continued even beyond the present life.

II. *Nature of moral constitution* (*revelations of Conscience*).

Our conscience or moral faculty reveals to us not only moral distinctions, but also a progressive scale of excellence and prompts us to aspire to higher and higher positions in that scale. In other words, it makes us strive after higher and higher levels of moral perfection. But in doing so, it indicates the continued existence of the soul, because, without continued existence, the continuous progress towards perfection which it demands would be impossible.

Further, our conviction of responsibility or accountability for our conduct points forward to and anticipates a continuation of life beyond the present. We feel ourselves accountable, not only to our fellow-men in the present life, but also to a higher power in an existence beyond the present. The existence of such an instinctive conviction must have some ground, and the ground can only be that we are destined to continue into a future life when such responsibility will be found to have some meaning.

Finally, the ineradicable sense of justice involved in our moral constitution demands that the righteous should be rewarded with happiness and the wicked punished. But the just distribution of happiness and misery which conscience demands is not found in the present life. In other words, we do not find in this world that the virtuous are necessarily happy. On the contrary, we often find that the righteous suffer, and the wicked prosper. Hence the belief is forced upon the human mind that there is an after-life in which the above demand of conscience will be satisfied and the balance of justice will be set right.

Thus, in all the departments of human nature we find 'vaticinations' or indications that the human soul is destined for a sphere of existence for which the present life is only a preparation.*

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* It is interesting to note here that attempts are being made by modern 'spiritualists' to prove the immortality of the soul and the reality of 'spirit-communication' in a scientific way. Even some eminent scientists believe now-a-days that communication with departed spirits is possible, and assert that their belief is justified by well-verified facts. But an adequate account of their method and theory cannot be given in an elementary treatise like the present one. (By 'Spiritualism' is meant the belief that certain peculiar phenomena are directly due to the influence of departed spirits, invoked by a 'medium').